



National Pollutant Release Inventory

**About the NPRI
1998**

Canadian Environmental Protection Act



**Environment
Canada**

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Canada**

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What is the National Pollutant Release Inventory?

The National Pollutant Release Inventory (NPRI) was created in 1992 to provide Canadians with information on pollutants released to the environment and transferred for disposal. Since then, its role has expanded to collect data on recycling and pollution-prevention activities. The program is delivered by Environment Canada.

Under the authority of the *Canadian Environmental Protection Act* (CEPA), owners or operators of facilities that manufacture, process or otherwise use one or more of the NPRI-listed substances under prescribed conditions are required to report. The first year for which companies were required to report to the NPRI was 1993.

The CEPA 1988 was in force when the notices of NPRI reporting requirements for 1998-2000 were published in the *Canada Gazette Part I*. The CEPA 1999 came into force in April 2000, and will be the authority for future NPRI reporting requirements.

The NPRI is the only legislated, nation-wide, publicly-accessible inventory of its type in Canada. One of the fundamental objectives of the NPRI is to provide Canadians with access to pollutant release information for facilities located in their communities. In addition, the NPRI supports a number of environmental initiatives by providing information that assists governments and others in identifying priorities for action, encourages industry to take voluntary measures to reduce releases, allows for tracking of progress in the reduction of releases, and supports a number of regulatory initiatives across Canada.

Who Reports to the NPRI?

In general, any person in Canada who owns or operates a facility is required to submit a report to the NPRI, if they meet all three of the following criteria:

- employees worked a total of 20 000 hours or more (equivalent to 10 full-time employees) during the calendar year, and
- the facility manufactured, processed or otherwise used 10 tonnes (10 000 kg) or more of an NPRI substance in the calendar year, and
- the NPRI substance was manufactured, processed or otherwise used at a concentration greater than or equal to 1% by weight, with the exception of NPRI substances considered to be by-products. The total weight of by-products, regardless of their concentration, must be included in the calculation of the 10-tonne threshold for each NPRI substance.

All facilities, from all economic sectors, meeting the reporting criteria are required to report, unless specifically exempt under the notice published in the *Canada Gazette Part I*. Therefore, reporting may be triggered in commercial and government services sectors such as electrical power generation utilities, airports and municipal water- and sewage-treatment plants. Exempt facilities include those (or any part thereof) used exclusively for:

- education and training of students (universities, colleges and schools),
- research or testing,
- the maintenance and repair of transportation vehicles,
- the distribution, storage or retail sale of fuels,
- the wholesale or retail sale of articles or products which contain listed substances, but which were not released during normal use at the facility,
- the retail sale of listed substances,
- growing, harvesting and management of renewable resources (forestry, fisheries and agriculture), but not those facilities which process or otherwise use their products,
- mining, but not those facilities engaged in the further processing of mined materials, and
- the drilling or operating of oil and gas wells, but not those facilities which process or otherwise use their products.

The number of facilities reporting to the NPRI can be expected to fluctuate from year to year because of:

- new facilities opening or existing facilities shutting down (either temporarily or permanently),
- facilities on the verge of meeting the 10-tonne reporting threshold which may trigger reporting in some years, but not others,
- facilities that have expanded their operations and, as a result, are meeting the reporting requirements for the first time,
- facilities that were previously required to report but have only recently come forward to declare themselves as reporters, or that have been identified as being required to report through Environment Canada's compliance promotion and enforcement efforts, and
- facilities that are reducing or eliminating the use of substances listed on the NPRI.

What is Reported to the NPRI?

All facilities in Canada meeting the NPRI reporting criteria are legally required to submit a report to Environment Canada if they manufacture, process or otherwise use one or more of the NPRI-listed substances under prescribed conditions.

A facility must file one report for each pollutant that meets the NPRI reporting requirements. The deadline for reporting and other requirements are published annually in the *Canada Gazette Part I*.

Reporting facilities must indicate whether the NPRI substance is manufactured, processed or otherwise used, and the nature of such activities and uses at the facility during the calendar year. They must report on-site releases and off-site transfers of pollutants, as well as facility and company information.

Facilities are required to provide information to which they can reasonably be expected to have access. In some instances, information is readily available from existing monitoring for provincial permits or licences. In other cases, a variety of estimation methodologies are used, depending on the information available and the type of industry. The lowest reportable unit is 0.001 tonne or one kilogram. In declining order of expected accuracy, estimates can be based on direct measurements, mass balances, emission factors or engineering estimates. It is expected that improvements in estimation methods, increased familiarity of facilities with the NPRI reporting requirements, and Environment Canada's compliance promotion and enforcement activities will continue to increase data accuracy.

NPRI List of Substances

The NPRI substance list, developed through public consultation, was derived from the 1990 United States Toxic Release Inventory, after deleting substances or classes of substances that were either not used in Canada at all, or were used in quantities smaller than one tonne per year. There were 178 substances on the first NPRI list in 1993.

Changes may be made to this list from year to year after consultations with Canadian stakeholders. Minor adjustments have been made to the list since the program's inception in 1993. For the 1998 reporting year, the total number of reportable substances was 176, while this number increased to 245 for the 1999 reporting year.

The list of NPRI substances is published in the *Canada Gazette Part I* for each reporting year.

Each chemical substance is identified by a Chemical Abstract Service (CAS) registry number – a unique number assigned by the Chemical Abstracts Service, a division of the American Chemical Society. A chemical may be known by several different names, but it has only one CAS number. Some of the reportable NPRI substances represent groups or classes of substances such as "copper (and its compounds)". For these groups, no specific CAS number exists.

CEPA-toxic and Carcinogenic Pollutants

Some substances on the NPRI list may be of particular interest because they have been determined to be "CEPA-toxic", "carcinogenic" or "probably carcinogenic".

Part II of the CEPA 1988 focuses on reducing the risks posed by new and existing substances. Schedule I is the List of Toxic Substances, which are or may be regulated under Part II. The NPRI identifies all substances on Schedule I of CEPA 1988 as "CEPA-toxic" substances.

Part II of the CEPA 1988 also requires the establishment of the Priority Substances List (PSL) – substances considered the most important for assessment in Canada. The first Priority Substances List (PSL 1) was published in February 1989, by the Ministers of the Environment and Health. All 44 substances on this list – including individual substances, groups of compounds, effluents and wastes – were assessed by Environment Canada and Health Canada. The assessment of these substances to determine whether or not they were toxic or capable of becoming toxic, as defined under Section 11 of the CEPA 1988, was completed within the five-year time frame. Twenty-five substances were found to be "toxic" and appropriate management strategies have been or are being developed. Those pollutants that meet the toxicity criteria are generally referred to as "CEPA-toxic", and this designation is also used to identify NPRI substances.

A substance is defined as "toxic" under Section 11 of the CEPA 1988 if:

- "... it is entering or may enter the environment in a quantity or concentration or under conditions
- (a) having or that may have an immediate or long-term harmful effect on the environment;
- (b) constituting or that may constitute a danger to the environment on which human life depends; or
- (c) constituting or that may constitute a danger in Canada to human life or health."

Twenty-five additional substances were selected in December 1995, for the second Priority Substances List (PSL 2) and are currently being assessed for toxicity under the CEPA. Final assessments for two PSL 2 substances had been published in the *Canada Gazette* as of March 29, 2000, and neither were found to be CEPA-toxic. The remaining PSL 2 substances will be assessed by the end of 2000.

The classification of carcinogens used by the NPRI program is that of the International Agency for Research on Cancer (IARC). In 1969, the IARC initiated a program to evaluate the carcinogenic risk of chemicals to humans and to produce monographs on individual chemicals. The Monographs Program has since been expanded to include consideration of exposures to complex mixtures of chemicals and to other agents, such as radiation and viruses. The monographs represent the first step in carcinogenic risk assessment, which involves examination of all relevant information to assess the strength of the available evidence that certain exposures could alter the incidence of cancer in humans. The second step is the quantitative risk estimation method.

The term "carcinogen" is used in these IARC monographs to denote an exposure that is capable of increasing the incidence of malignant neoplasm or tumour; the induction of benign neoplasm may, in some circumstances, contribute to the judgment that the exposure is carcinogenic. The IARC monographs are recognized as an authoritative source of information on the carcinogenicity of a wide range of human exposures.

IARC-1 grouped substances have been defined as agents (mixtures) which are carcinogenic to humans. The term "agent" is defined by the IARC to include individual chemical compounds, groups of related chemical compounds, physical agents (such as radiation) and biological factors (such as viruses). IARC-2A grouped substances are defined as probably carcinogenic to humans. This category is used when there is limited evidence of carcinogenicity in humans, but sufficient evidence of carcinogenicity in experimental animals.* The NPRI-listed carcinogenic substances include only those designated by IARC as 1 or 2A.

Industrial Classification Codes and Industrial Sectors

Industrial classifications are a means of identifying different types of businesses and industries. The NPRI has adopted the North American Industry Classification System (NAICS) as the standard for identifying industrial sectors to enable better comparisons of NPRI data with similar inventories in the U.S. and Mexico. The NPRI continues to collect Canadian and American Standard Industrial Classification (SIC) data to retain continuity with its historical data.

The NPRI requires facilities to report the SIC and NAICS codes that best represent the primary industrial activity of the facility. This allows the NPRI to identify trends in releases from specific industrial sectors.

On-site Releases

An on-site release is an on-site discharge of a pollutant to the environment. This includes emissions to air, discharges to surface waters, on-site releases to land and deep-well underground injection, within the boundaries of the facility.

On-site releases are further subdivided as releases to:

- Air
 - stack/point
 - storage/handling
 - fugitive
 - spills
 - other non-point
- Surface water
 - discharges
 - spills
 - leaks
- Land
 - landfill
 - land treatment
 - spills
 - leaks
 - other
- Underground injection.

* Information regarding the International Agency for Research on Cancer (IARC) was obtained from the IARC Web site at <www.iarc.fr/>. This site provides information on the IARC's mission and publications (including the IARC *Monographs Evaluations* and IARC epidemiology data).

Fugitive releases are the total of all releases to air that are not released through confined process streams, such as fugitive equipment leaks from valves.

Landfills are sites in which wastes containing NPRI pollutants are buried. Most landfills found in Canada are provincially-approved, waste-disposal sites. Some landfills are classified as hazardous-waste-approved, but more typically they are disposal sites for non-hazardous waste only. Regardless of classification, all landfills are required to have appropriate permits and be specifically designed under strict guidelines for use as a final disposal site for waste. For the purposes of the NPRI, on-site landfilling is reported as an on-site release. If an NPRI substance is transferred to an off-site landfill, it is reported as an off-site transfer for disposal.

The materials released to landfill are wastes from production or are generated as a result of pollution-control measures. These materials are put in a landfill to minimize the risk to health and the environment. While landfilling is an accepted waste-management practice, a preferred option is recycling. The best approach is to prevent the generation of wastes or pollutants using pollution-prevention techniques.

Land treatment, also called application farming, is a disposal method by which a waste containing a listed pollutant is applied or incorporated into soil for biological degradation. This type of disposal method is usually approved under provincial jurisdiction. For the purposes of the NPRI, on-site land treatment is reported as an on-site release. If an NPRI substance is transferred off site for land treatment, it is reported as an off-site transfer for disposal.

A leak differs from a spill in terms of the time required for an event. Spills normally occur over a period of hours or days, whereas leaks occur over a period of days or months.

Underground injection is another method of waste disposal. Subject to provincial regulation, liquid wastes are injected into known geological formations, generally at great depths.

Off-site Transfers

An off-site transfer is a shipment of an NPRI-listed substance to an off-site location for disposal or for recycling. Facilities must provide the name and location of the off-site facility receiving the shipment.

Off-site Transfers for Disposal

"Disposal" is final disposal of the material (e.g., landfill) or storage and treatment (e.g., stabilization) prior to final disposal.

Information on off-site transfers for disposal includes treatment and disposal methods. Off-site treatments do not necessarily constitute an environmental release because the pollutant may be altered chemically or physically, and may not be ultimately released in its original form. Therefore, disposal methods represent environmental releases with different environmental impacts, depending on the site and the pollutant.

Eight major off-site disposal methods are identified:

- physical treatment, such as drying, evaporation, encapsulation or vitrification,
- chemical treatment, such as precipitation, stabilization and neutralization,
- biological treatment, such as bio-oxidation,
- incineration or thermal treatment where energy is not recovered,
- containment, either in a landfill or other storage,
- municipal sewage treatment plant (MSTP),
- underground injection at an off-site location, and
- land treatment, for the purpose of land application or land farming.

Off-site transfers for disposal are reported separately from on-site releases because:

- off-site transfers represent a movement of the pollutant to a different geographical location than that of the facility,
- off-site transfers do not always represent entry of the pollutant into the environment, e.g., when off-site transfers are sent for treatment and the pollutants are transformed into other chemicals,
- management of the pollutant becomes the responsibility of another owner or operator,
- reporting of off-site transfers provides complete information on the fate of the pollutant, and
- wastes may be transferred a number of times, which may lead to double-counting of those materials.

The NPRI is improving the way in which facilities identify the off-site facilities to which they transfer their wastes. This should allow the NPRI to better identify instances of double-counting of transfers in the future.

Off-site Transfers for Recycling

"Recycling" refers to activities that keep a material or a component of the material from becoming a waste destined for final disposal.

As a result of public consultations in 1996, the reporting of recycling activities to the NPRI became mandatory, beginning in the 1998 reporting year.

Generally, materials transferred off site for recycling include those sold to recyclers, such as metal shavings or turnings, material sent off site for processing, cleaning or reclamation and returned to the facility, and those materials sent back to suppliers for credit or payment. The recyclable material may be used in the manufacture of another product. Components may be recovered or reclaimed from the recyclable material or the material may be used as a fuel for energy recovery. Energy recovery is applicable only when the energy recovered from combustion is used as an alternative to fossil fuels or other forms of energy.

Substances and materials transferred off site for recycling activities are not normally released to an environmental medium. Once transferred off site to another facility, the handling and further processing of those substances may result in releases, which may be reportable by that off-site facility if it meets the NPRI reporting criteria.

Ten types of recycling operations are identified, based on those set out in the *Canadian Export and Import of Hazardous Waste Regulations* and the International Waste Identification Code developed by the Organization for Economic Cooperation and Development. These activities include:

- energy recovery,
- recovery of solvents,
- recovery of organic substances (not solvents),
- recovery of metals and metal compounds,
- recovery of inorganic materials (not metals),
- recovery of acids or bases,
- recovery of catalysts,
- recovery of pollution-abatement residues,
- refining or reuse of used oil, and
- other recovery, reuse and recycling activities.

With the exception of energy recovery, the recycling activities are related to the nature of the substance being recycled (solvents, organic substances, metals, acids or bases, etc.). However, the energy recovery activity is distinct because it is based on the energy content (BTU value) of the NPRI substance and its ability to be used as a fuel for energy recovery. The NPRI publishes recycling data under two categories – off-site transfers for recycling (excluding energy recovery) and off-site transfers for energy recovery.

Pollution-Prevention Activities

Reporting of pollution-prevention (P2) activities became a mandatory requirement beginning in the 1997 reporting year. It was introduced to help the federal government and others track progress in pollution prevention and to provide companies undertaking P2 activities with an additional means of demonstrating these activities to the public.

Pollution prevention is an environmental protection approach that seeks to eliminate the causes of pollution rather than managing it after it has been created. Pollution prevention is defined as:

“the use of processes, practices, materials, products or energy that avoid or minimize the creation of pollutants and waste, and reduce the overall risk to human health or the environment”. (*Pollution Prevention: A Federal Strategy for Action*, Environment Canada, June 1995)

Pollution prevention encourages the kinds of changes that are likely to lead to lower production costs, resource conservation and increased efficiencies.

Generally speaking, pollution-prevention techniques and practices focus on areas such as:

- materials or feedstock substitution (e.g., using aqueous-based rather than solvent-based cleaners),
- product design or reformulation (e.g., changing product specifications to reduce or eliminate the use of toxic substances, modifying product design or composition to make them more environmentally friendly),
- equipment or process modifications (e.g., instituting recycling within a process, switching from the use of solvents to mechanical paint-stripping devices),

-
- spill and leak prevention (e.g., taking measures to prevent releases such as installing splash guards and drip trays around equipment),
 - on-site reuse, recycling or recovery (e.g., using a small distillation unit to reclaim solvents on site),
 - improved inventory management or purchasing techniques (e.g., avoiding the unnecessary generation of waste by ensuring that materials do not stay in inventory beyond shelf life, instituting a clearinghouse to exchange materials that would otherwise be discarded), and
 - good operating practices or training (e.g., changing production schedules to minimize equipment and feedstock changeovers, training staff to recognize and implement P2 opportunities).

Other environmental protection approaches focus on waste management. These include pollution-control and waste-treatment activities as well as off-site recycling and disposal activities. These approaches also reduce environmental and health risks by ensuring that pollution or waste that is not prevented is well managed.

Reporting Pollution-Prevention Activities in the NPRI

Facilities that have taken measures to prevent the generation of NPRI pollutants and wastes are asked to indicate, from the list of pollution-prevention techniques and practices provided, what type of P2 activities they have implemented, on a substance-by-substance basis. They are asked to provide qualitative data only, but are encouraged to provide further details on the nature of their P2 activities if they so desire (including environmental and economic benefits).

Facilities are required to report on their P2 activities for NPRI-listed substances only. However, they are also encouraged to provide information on other P2 initiatives (e.g., P2 activities for non-NPRI substances, water and energy conservation initiatives, etc.).

Qualitative reporting provides limited basic information on P2 activity. Qualitative data, such as the information provided by facilities reporting to the NPRI, indicate if P2 activity has occurred in reporting facilities, but do not indicate either the extent of these activities (frequency, comprehensiveness) or their effect on the generation of pollutants and waste.

How to Obtain NPRI Information

There are many ways to obtain information on releases and transfers of NPRI pollutants nationally, provincially and at the local community level.

Each year, Environment Canada publishes a national overview of NPRI data reported by Canadian facilities. This overview includes information on the NPRI-listed substances and their releases on site to the environment and off-site transfers for disposal or recycling. Information is presented on a national basis, summarizing releases by environmental medium, by pollutant and by industrial sector, with comparisons to the previous year's data. Supplementary tables that complement the national overview are available electronically on the NPRI Web site at <www.ec.gc.ca/pdb/npri/>. These tables provide detailed information reported to the NPRI, such as the complete listing of reporting facilities and reported on-site releases and off-site transfers of pollutants for the reporting year.

Other reports and analyses are developed and made available to the public throughout the year on the NPRI Web site. These reports include multi-year trend analyses, provincial and regional summaries, additional supplementary tables such as those summarizing releases by industrial sectors and other special features.

All non-confidential NPRI information and data are also accessible on the NPRI Web site. The Web site includes background information on the NPRI, provides news on upcoming events, highlights stakeholder consultation activities and provides links to similar Web sites in North America and around the globe. It provides access to current and previous NPRI reporting requirements, guidance documents and downloadable data products. Electronic versions of previously-published annual summary reports, and databases, are also available.

In addition, the NPRI Web site allows the user to query the NPRI database on specific facilities in each of the reporting years. This interactive querying feature allows the user to select a specific facility reporting to the NPRI, geographic area or release for any NPRI-listed pollutant. Searches can also be performed by industrial sectors, based on SIC codes.

Factors to Consider when Using NPRI Data

NPRI data provide a publicly-available annual record of releases and transfers of listed pollutants from facilities operating in Canada. However, NPRI data represent only a portion of all chemical releases and transfers to the Canadian environment.

Other substances, such as greenhouse gases (e.g., carbon dioxide and methane), ozone-depleting substances, many pesticides and other pollutants are not part of the current list of NPRI substances and may be reported to other inventories or managed under other programs.

While the NPRI program currently collects pollutant release and transfer data from a broad range of industrial and non-industrial sectors, not all sources are captured by the NPRI. For example, industrial and stationary fuel combustion sources and mobile sources (e.g., automobiles and trucks), are known to be major contributors of hazardous air pollutants (e.g., benzene and 1,3-butadiene are both considered toxic under the *Canadian Environmental Protection Act* (CEPA-toxic)). Long-range transboundary air pollution (LRTAP) from other countries may be a contributor of persistent organic pollutants (POPs) and heavy metals (HM) such as cadmium and mercury.

Facilities that do not meet the reporting thresholds because of their size (either the number of employees or the quantity of substances used), such as dry cleaners, or because they are exempt, such as gas stations, do not report to the NPRI. Collectively, however, releases from these sources may account for the majority of releases of some pollutants.

Releases of a particular pollutant by a facility reporting to the NPRI should be considered in the overall context of these other pollutants, other sources and smaller-sized facilities.

Different factors must be considered before drawing conclusions on the environmental performance of specific facilities or industrial sectors. In examining the amount of total releases of any one facility or sector, it is important to consider more than just their magnitude. One should also consider the amount being released relative to the size of the facility or sector, the complexity of the process and the best available technologies. It would be incorrect to assume that facilities or industrial sectors with the largest releases or transfers are less inclined than others toward pollution prevention and control.

Risk to human health and the environment from on-site releases of pollutants cannot be determined from NPRI data alone. Although the data are useful as a starting point in identifying potential risks, other information is required before such assessments can be made.

Risk depends on many factors, such as the toxicity of the pollutant, the extent of the exposure, the type of release or transfer and the environmental medium receiving the pollutant. The amount of releases of some pollutants may not necessarily be commensurate with their environmental or health impacts. Conversely, smaller releases of specific pollutants may have significant impacts.

Additional information can be obtained from sources listed on the following page.

Confidential Information

Any person who provides information to the Minister of the Environment, under the provisions of Part II of the CEPA, may submit a written request that the information be treated as confidential. The request for confidentiality must accompany the NPRI report submitted to Environment Canada, and must meet criteria set out in the *Access to Information Act*. A request for confidentiality will be denied if the data are already in the public domain.

The NPRI does not include confidential data in any public documents. It does, however, report in its annual summary the number of facilities granted confidential status and their overall contribution to releases and transfers.

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For More Information

Additional References

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Tel.: (613) 957-3143

Fax: (613) 941-8632

Web site: www.hc-sc.gc.ca/ehd/catalogue/index.htm

Canadian Centre for Occupational Health and Safety

Chemical Evaluation Search and Retrieval System (CESARS)
250 Main Street East
Hamilton, ON
L8N 1H6

Tel.: (905) 570-8094

Fax: (905) 572-2206

Web site: www.ccohs.ca/products/databases/cesars.html

Commission For Environmental Cooperation (CEC)

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Web site: www.cec.org

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Web site: www.iarc.fr/

Agency for Toxic Substances and Disease Registry

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National Library of Medicine (TOXNET)

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Web site: www.nlm.nih.gov/hinfo.html







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National Pollutant Release Inventory

**National Overview
1998**

Canadian Environmental Protection Act



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Executive Summary

The 1998 National Overview is the sixth annual report published under Environment Canada's National Pollutant Release Inventory (NPRI) program. The report provides information on 176 listed substances, specifically their on-site releases to air, water, land and underground injection and off-site transfers for disposal or recycling.

The NPRI is the only legislated, nation-wide, publicly-accessible inventory of its type in Canada. One of the fundamental objectives of the NPRI is to provide Canadians with access to pollutant release information for facilities located in their communities. In addition, the NPRI supports a number of environmental initiatives by providing information that assists governments and others in identifying priorities for action, encourages industry to take voluntary measures to reduce releases, allows the tracking of progress in reducing releases, and supports a number of regulatory initiatives across Canada.

Although NPRI data are useful as a starting point in identifying some of the sources of pollutants and their possible risks to human health and the Canadian environment, they represent only a portion of all chemical releases and transfers to the Canadian environment from a range of industrial and non-industrial sources. Releases of a particular pollutant by a facility reporting to the NPRI should, therefore, be considered in the overall context of other pollutants and sources.

The 1998 National Overview includes data from the NPRI for the calendar years 1997 and 1998, as they appeared in the NPRI database on March 29, 2000. Non-confidential NPRI information and data are also accessible on the Internet at Environment Canada's NPRI Web site at <www.ec.gc.ca/pdb/npri/>. It should be noted that the NPRI data on the Web site are updated regularly as a result of new or revised reports submitted by facilities. As a result of revisions submitted after March 29, 2000, quantities identified in this report may, at times, differ from those listed on the national database.

New features of the 1998 NPRI report include:

- **New report format** – The NPRI annual report has a different format for 1998. To improve timeliness of national data release, this 1998 National Overview is part of a series of reports and fact sheets to be issued this year to present NPRI data. A companion document, *About the National Pollutant Release Inventory*, describes the inventory and provides context and background information. This National Overview is focused on the national picture and on changes from 1997 to 1998. Fact sheets to be released later in 2000 will provide more in-depth trend analysis and overviews of pollutant releases and transfers by province, territory or region, information previously included in the yearly NPRI Summary Report.
- **Mandatory reporting of recycling activities** – In previous years, the reporting of recycling activities was optional. As a result of public consultations in 1996, facilities now must report the quantities of substances transferred off site for recycling, the nature of the recycling activity and the name and address of the receiving facility.

Highlights of the 1998 NPRI National Overview (based on analysis of all data from 1997 to 1998)

In 1998, facilities across Canada reported:

- on-site releases totalling 160 166 tonnes, a decrease of 1 427 tonnes (-0.9%) from 1997,
- off-site transfers for disposal of 88 489 tonnes, a decrease of 9 610 tonnes (-9.8%) from 1997, and
- 245 798 tonnes of NPRI substances transferred off site for recycling, which included 13 078 tonnes transferred off site for energy recovery. No year-to-year comparisons are made because reporting was optional in previous years.

A total of 2 007 Canadian facilities submitted 7 448 pollutant reports to the NPRI in 1998. Of the 176 substances on the NPRI list in 1998, the NPRI received reports on 135 substances. These numbers are similar to the information reported for 1997.

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1. Introduction

This 1998 National Overview is the sixth annual report in the series published under the NPRI program. Its format has changed from earlier years. Readers should refer to the companion document *About the National Pollutant Release Inventory* for a description of the program as well as contextual and background information for this report. It can be obtained from the NPRI offices listed on the inside front cover, or on Environment Canada's NPRI Web site at <www.ec.gc.ca/pdb/npri>. Supplementary Tables that complement this National Overview are also available on the NPRI Web site and are identified in Chapter 5.

This report reflects on-site releases to the environment and off-site transfers for recycling and disposal of pollutants reported to Environment Canada, by facility, for the calendar year 1998. It also provides information on changes since 1997. Data included in this report are as they appeared in the NPRI database on March 29, 2000. Appendix 1 lists the 176 substances on the 1998 NPRI list.

The terms "pollutant" and "substance" are used and referenced throughout this report. "Pollutant" is used to describe a substance which is released on site to the environment or transferred off site for disposal; "substance" is used when describing any other activities (recycling or energy recovery) or programs.

A total of 2 007 Canadian facilities reported to the NPRI in 1998. A facility must file one report for each pollutant that meets the NPRI reporting requirements. Facilities across Canada submitted 7 448 pollutant reports to the NPRI in 1998.

Chapter 2 provides information on the 1998 reported data¹ and includes a year-to-year comparison (1997-1998), using all data reported to the NPRI for the following elements:

- number of reporting facilities,
- number of pollutant reports,
- on-site releases,
- off-site transfers for disposal,
- off-site transfers for recycling (a mandatory reporting requirement beginning in 1998), and
- on-site releases and off-site transfers of NPRI-listed, CEPA-toxic and carcinogenic pollutants.

1.1 Supplementary Analyses

Other reports and analyses are developed and made available to the public throughout the year on the NPRI Web site. These reports include multi-year trend analyses, provincial and regional summaries, additional supplementary tables such as those summarizing releases by industrial sectors and other special features.

1.2 Confidential Information

Any person who provides information to the Minister of the Environment, under the provisions of Part II of the *Canadian Environmental Protection Act* (CEPA) 1988, which was in force when the *Canada Gazette* notice for the 1998 NPRI was published, may submit a written request that the information be treated

¹ Because of rounding of on-site release and off-site transfer quantities throughout this report, individual values may not equal the totals.

as confidential. The request for confidentiality must accompany the NPRI report submitted to Environment Canada, and must meet criteria set out in the *Access to Information Act*.

At the time of publication of this report, four companies representing six facilities were granted confidential status for information provided to the 1998 NPRI. The following NPRI data were reported by those facilities:

- Total pollutant reports: 38
- Total on-site releases in 1998: 66 tonnes
- Total off-site transfers for disposal in 1998: 3 489 tonnes
- Total off-site transfers for recycling in 1998: 69 tonnes
- Total off-site transfers for energy recovery in 1998: 0 tonnes

Data presented in this report do not include confidential information.

2. Tracking Progress

One of the main purposes of the NPRI is to provide Canadians with a tool to track progress in reducing on-site releases and off-site transfers for disposal of listed pollutants in Canada. Data in this National Overview represent NPRI information reported by facilities in the 1998 reporting year, providing an overview of changes in reported releases and transfers from 1997 to 1998. Longer-term trend analysis using matched data sets² will be undertaken later in 2000.

There are many reasons for changes to facility releases and transfers off site for disposal. Some reported changes showing increases or decreases are real – that is, they reflect changes in the quantities of pollutants released or transferred. In other cases, the changes in reported releases are the result of other factors.

The number of facilities reporting to the NPRI changes each year. Some cease reporting because they have gone out of business or because they do not meet reporting requirements. This could be because of changes in processes and material use. In many cases, companies deliberately reduce or eliminate the use of NPRI substances. New facilities appear each year because of compliance promotion, changes in the type of substances used, or increases in use from year to year.

Other changes may be the result of facilities refining their reporting methodologies. In many instances, companies have measured their releases in response to the publication of facility-specific information, based on estimated values.

The summary tables found in this report highlight the percent change from 1997 to 1998. Further explanation is warranted for two aspects of this calculation – the release or transfer quantity and percent contribution to the national total for that pollutant, and the percent change from 1997 to 1998. The second value is only of significance if releases or transfers were reported in relatively large quantities in 1997. Releases or transfers of small quantities in 1997 may show large changes (e.g., +109%) when expressed in terms of a percentage, but the change in tonnage is actually small. This is attributable to the formula used to calculate percent change between 1997 and 1998:

$$\% \text{ Change} = \frac{[(\text{Total Quantity in 1998}) - (\text{Total Quantity in 1997})]}{(\text{Total Quantity in 1997})} \times 100\%$$

The baseline year is 1997. If the 'Total Quantity in 1997' was comparatively small (e.g., 0.001 tonnes) compared to the 'Total Quantity in 1998' (e.g., 10 tonnes), the percent change for this example would be:

$$\% \text{ Change} = \frac{[(10 \text{ tonnes}) - (0.001 \text{ tonnes})]}{0.001 \text{ tonnes}} \times 100\% = +9\,999\%$$

2 A matched data set selects only those facilities that reported in 1997 and 1998 for the same pollutants. A matched data set tracks trends for a constant set of facilities and pollutant reports.

2.1 Year-to-Year Analysis of NPRI Data (1997-1998)

Table 1 provides an overview of all NPRI information from 1997 to 1998.

- Total number of facilities reporting:
 - 1 989 (1997)
 - 2 007 (1998)
 - an increase of 18 (+0.9%) from 1997
- Total number of pollutant reports submitted:
 - 7 415 (1997)
 - 7 448 (1998)
 - an increase of 33 (+0.4%) from 1997
- Total reported pollutants:
 - 138 (1997)
 - 135 (1998)
 - a decrease of 3 (–2.2%) from 1997
- Total on-site releases:
 - 161 593 tonnes (1997)
 - 160 166 tonnes (1998)
 - a decrease of 1 427 tonnes (–0.9%) from 1997
- Total off-site transfers for treatment and disposal:
 - 98 099 tonnes (1997)
 - 88 489 tonnes (1998)
 - a decrease of 9 610 tonnes (–9.8%) from 1997
- Total off-site transfers for recycling, excluding energy recovery (mandatory in 1998):
 - 245 798 tonnes (1998)
 - no year-to-year comparisons are made because reporting was optional in previous years
- Total off-site transfers for energy recovery:
 - 13 078 tonnes (1998)
 - no year-to-year comparisons are made because reporting was optional in previous years

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TABLE 1
NATIONAL SUMMARY OF NPRI INFORMATION (1997-1998)

	1997	1998	Change (1997-1998)	% Change (1997-1998)
Total Facilities	1 989	2 007	18	0.9
Total Pollutant Reports	7 415	7 448	33	0.4
Pollutants Reported	138	135	-3	-2.2
<i>On-site Releases (tonnes):</i>				
Air	109 664.3	110 319.3	655.0	0.6
Water	14 877.1	13 298.1	-1 579.0	-10.6
Land	18 614.2	19 762.5	1 148.3	6.2
Underground Injection	18 224.6	16 599.3	-1 625.3	-8.9
Total On-site Releases	161 593.0	160 165.6	-1 427.4	-0.9
<i>Off-site Transfers for Treatment (tonnes):</i>				
Physical	3 483.4	2 270.9	-1 212.5	-34.8
Chemical	10 571.2	8 661.8	-1 909.4	-18.1
Biological	2 937.0	2 632.2	-304.8	-10.4
Incineration	12 902.4	12 235.6	-666.8	-5.2
MSTP	9 954.2	8 774.4	-1 179.8	-11.9
Total Off-site Treatment	39 848.2	34 574.9	-5 273.3	-13.2
<i>Off-site Transfers for Final Disposal (tonnes):</i>				
Landfill	49 689.7	45 094.8	-4 594.9	-9.2
Storage	3 991.5	3 933.3	-58.2	-1.5
Underground Injection	4 359.4	4 358.6	-0.8	0.0
Land Treatment	209.9	527.5	317.6	151.3
Total Off-site Final Disposal	58 250.6	53 914.3	-4 336.3	-7.4
Total Off-site Transfers	98 098.7	88 489.2	-9 609.5	-9.8
<i>Off-site Transfers for Recycling (tonnes)*:</i>				
Recycling		245 798.3		
Energy Recovery		13 078.1		
Total Recycling		258 876.4		

* Reporting of transfers for recycling was voluntary for 1997 and mandatory for 1998. As a result, no year-to-year comparison was made.

The following are highlights of year-to-year changes:

1. Total On-site Releases from 1997 to 1998

Table 1 shows that total on-site releases of 161 593 tonnes were reported in 1997 and 160 166 tonnes in 1998, a decrease of 1 427 tonnes (-0.9%). This decrease in total releases results from increased releases for some substances and decreased releases for others. More information on substance-by-substance changes may be found in Section 2.2. Examining a matched data set, which considers only those facilities that reported in 1997 and 1998 for the same pollutants, releases decreased by 3.3%. There were no major changes in reporting requirements and no other major factors that affected the data from 1997 to 1998. Thus, comparisons between 1997 and 1998 using the matched data set do not differ greatly from



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those using all data. Analyses of releases and transfers for this report will be done using all data. Longer-term trend analysis using matched data sets will be later in 2000.

2. Off-site Transfers for Recycling in 1998

New mandatory reporting requirements for recycling began in 1998. The 245 798 tonnes reported in 1998 as transfers for recycling provides a more accurate representation of annual recycling activity in Canada by facilities reporting to the NPRI than values reported in earlier years.

The total quantity of transfers to recycling is approximately equal to the total releases on site and transfers off site in waste. This illustrates the importance of recycling in the management of materials no longer useable in facilities generating these materials.

Mandatory reporting of transfers for recycling provides a more complete picture of overall environmental management activities at facilities. Recycling reduces the quantity of material sent for disposal and reduces the amount of raw materials used. Recycling activities do, in some cases, produce releases and wastes. However, recycling allows the reuse of materials that would otherwise be wastes.

3. Impact of New Reporting Facilities and Missing Reporting Facilities

A total of 2 007 facilities reported to the NPRI in 1998. This is a net increase of 18 over 1997. There were 164 facilities that reported in 1998 but not in 1997, which released 2 902 tonnes of NPRI pollutants in 1998. There were 146 facilities which released 2 503 tonnes of pollutants in 1997, but did not report to the NPRI in 1998. The difference between 1998 releases by new reporting facilities and 1997 releases by facilities that did not report in 1998 is approximately 400 tonnes.

Additional information on notable facility decreases and increases in on-site releases and off-site transfers is provided in Sections 2.2.3 and 2.3.3, respectively.

2.2 On-site Releases in 1998

In 1998, facilities across Canada reported on-site releases totalling 160 241 tonnes. On-site releases decreased by 1 427 tonnes (-0.9%) from 1997, while the number of facilities reporting to the NPRI and the number of pollutant reports submitted increased slightly. Figure 1 shows that releases to air accounted for 110 319 tonnes (68.9%), releases to surface water for 13 298 tonnes (8.3%), releases to land for 19 763 tonnes (12.3%), and releases to underground injection for 16 599 tonnes (10.4%).

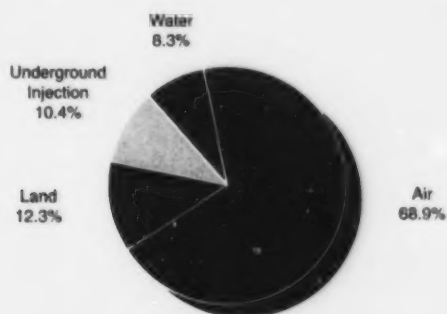


Figure 1
On-site Releases in 1998

Figure 2 shows the changes in releases to each environmental medium from 1997 to 1998.

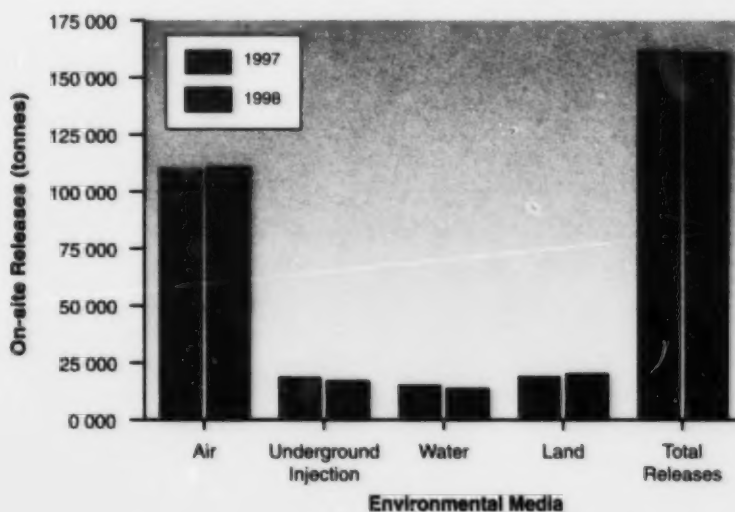


Figure 2
On-site Releases by Environmental Media (1997-1998)

2.2.1 On-site Releases by Environmental Media in 1998 – 25 NPRI Pollutants Released in the Largest Quantities

Table 2 highlights the 25 NPRI pollutants released on site in the largest quantities by environmental media in 1998. On-site releases of these pollutants represent 91.7% of the national total and decreased by 597 tonnes (-0.4%) from 1997. There were 3 401 reports (68.9% of the total number of pollutant reports) received in 1998 for these 25 pollutants.

The first five pollutants released on site in the largest quantities remained the same from 1997 to 1998 – total ammonia, methanol, sulphuric acid, hydrochloric acid and xylene (mixed isomers).

The largest changes in total on-site releases are noted below:

- Sulphuric acid:
 - 10 814 tonnes (1997)
 - 14 798 tonnes (1998)
 - an increase of 3 984 tonnes (+26.9%) from 1997

More than 60% of this increase is the result of increased releases of sulphuric acid by electric power generation facilities, because of an increase in electricity generation and, in part, better measuring and estimating methods.

- Ethylene glycol:
 - 4 887 tonnes (1997)
 - 3 530 tonnes (1998)
 - a decrease of 1 357 tonnes (–38.4%) from 1997

This is partly the result of a decreased need for de-icing at airports because of differing weather conditions.

- Cyclohexane:
 - 3 304 tonnes (1997)
 - 1 999 tonnes (1998)
 - a decrease of 1 305 tonnes (–65.3%) from 1997.

One company, Nova Chemicals Ltd. (NPRI #4700) in Corunna, ON, reduced releases by more than 900 tonnes by commissioning new equipment to recover and recycle cyclohexane.

2.2.2 On-site Releases by Industrial Sector in 1998

Figure 3 presents the five industrial sectors reporting the largest on-site releases by sector in both 1997 and 1998. These sectors represent 68% of overall on-site releases for 1998. The sectors are identified by Standard Industrial Classification (SIC) codes, which are numerical identifiers for different types of businesses and industries. The NPRI also collects information using the North American Industry Classification System (NAICS) codes and will likely use NAICS codes to identify sectors in subsequent annual reports.

The following listing compares all 1997 and 1998 releases reported by the five industrial sectors with the largest on-site releases in 1998:

- SIC 37 – Chemical and Chemical Products Industries:
 - total on-site releases in 1997: 39 095 tonnes (330 facilities)
 - total on-site releases in 1998: 34 999 tonnes (332 facilities)
 - a decrease of 4 096 tonnes (–10.5%) from 1997
- SIC 49 – Other Utility Industries:
 - total on-site releases in 1997: 18 304 tonnes (50 facilities)
 - total on-site releases in 1998: 21 552 tonnes (49 facilities)
 - an increase of 3 248 tonnes (+17.7%) from 1997

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TABLE 2
ON-SITE RELEASES BY ENVIRONMENTAL MEDIUM IN 1998 -
25 NPRI POLLUTANTS RELEASED IN THE LARGEST QUANTITIES (1997-1998) (TONNES)

CAS No.	Pollutant	1998					1997				
		Underground									
		Air	Injection	Water	Land	Total	No. of Reports	Total	No. of Reports	Total	No. of Reports
N/A	Ammonia (total)	18 908.0	7 349.2	7 132.3	550.1	33 944.3	255	34 737.8	251	34 737.8	251
67-56-1	Methanol	13 956.7	4 757.2	1 010.6	60.6	19 798.2	287	19 967.3	286	19 967.3	286
7664-93-9	Sulphuric acid	14 679.4	0.0	108.5	4.7	14 797.9	156	10 814.2	148	10 814.2	148
7647-01-0	Hydrochloric acid	11 513.4	96.9	15.5	0.5	11 630.9	140	10 771.4	146	10 771.4	146
1330-20-7	Xylene (mixed isomers)	6 961.7	38.9	2.3	4.8	7 019.2	292	7 371.9	290	7 371.9	290
N/A	Zinc (and its compounds)	674.3	0.1	192.3	6 051.5	6 927.3	219	6 739.2	229	6 739.2	229
108-88-3	Toluene	6 445.0	66.7	6.2	21.2	6 550.5	300	6 994.0	306	6 994.0	306
78-93-3	Methyl ethyl ketone	4 542.5	386.0	0.0	1.4	4 936.3	143	5 164.3	140	5 164.3	140
N/A	Nitrate ion in solution at pH ≥ 6.0	28.0	148.8	3 968.8	66.0	4 212.4	51	4 679.2	44	4 679.2	44
107-21-1	Ethylene glycol	246.2	565.9	21.9	2 691.4	3 530.4	165	4 887.2	186	4 887.2	186
67-64-1	Acetone	3 340.7	110.0	54.5	0.0	3 512.9	134	4 424.8	132	4 424.8	132
7664-39-3	Hydrogen fluoride	3 404.5	0.7	0.0	0.0	3 405.2	44	3 141.4	39	3 141.4	39
1332-21-4	Asbestos (friable form)	0.0	0.0	0.0	3 021.6	3 022.2	9	3 067.7	11	3 067.7	11
N/A	Manganese (and its compounds)	93.0	0.0	339.1	2 194.1	2 635.4	191	2 932.9	179	2 932.9	179
74-85-1	Ethylene	2 562.9	0.0	0.3	0.1	2 564.4	43	2 057.8	44	2 057.8	44
75-09-2	Dichloromethane	2 212.7	0.0	0.0	0.0	2 215.1	53	2 447.7	56	2 447.7	56
75-15-0	Carbon disulphide	2 195.2	0.0	0.0	0.0	2 196.1	26	3 094.1	22	3 094.1	22
N/A	Arsenic (and its compounds)	173.0	1 719.8	4.5	183.6	2 081.7	30	2 114.7	30	2 114.7	30
67-63-0	Isopropyl alcohol	2 043.9	3.0	0.0	0.0	2 055.5	166	2 179.6	175	2 179.6	175
110-82-7	Cyclohexane	1 993.7	0.3	2.0	0.3	1 999.1	84	3 303.6	78	3 303.6	78
N/A	Chromium (and its compounds)	51.5	2.4	21.8	1 876.5	1 959.9	135	955.9	122	955.9	122
N/A	Lead (and its compounds)	544.3	0.0	17.6	1 060.9	1 628.0	125	1 531.0	120	1 531.0	120
71-43-2	Benzene	1 475.5	103.2	1.7	0.5	1 585.8	100	1 773.2	100	1 773.2	100
50-00-0	Formaldehyde	1 237.3	40.3	167.6	0.0	1 448.1	86	1 424.5	90	1 424.5	90
N/A	Copper (and its compounds)	495.6	0.0	69.0	675.8	1 245.6	167	924.5	171	924.5	171
Total Largest On-site Releases		99 778.9	15 389.5	13 136.4	18 465.7	146 902.5	3 401	147 499.6	3 395	147 499.6	3 395
National Total		110 318.6	16 599.3	13 298.1	19 762.5	160 165.6	4 933	161 593.0	4 949	161 593.0	4 949
% of National Total		90.4	92.7	98.8	93.4	91.7	68.9	91.3	68.6	91.3	68.6



TABLE 2
ON-SITE RELEASES BY ENVIRONMENTAL MEDIUM IN 1998 -
25 NPRI POLLUTANTS RELEASED IN THE LARGEST QUANTITIES (1997-1998) (TONNES)

CAS No.	Pollutant	1998				1997		
		Underground		Water	Land	Total	No. of Reports	No. of Reports
		Air	Injection					
N/A	Ammonia (total)	18 908.0	7 349.2	7 132.3	550.1	33 944.3	255	34 737.8
67-56-1	Methanol	13 956.7	4 757.2	1 010.6	60.6	19 798.2	287	19 967.3
7664-93-9	Sulphuric acid	14 679.4	0.0	108.5	4.7	14 797.9	156	10 814.2
7647-01-0	Hydrochloric acid	11 513.4	96.9	15.5	0.5	11 630.9	140	10 771.4
1330-20-7	Xylene (mixed isomers)	6 961.7	38.9	2.3	4.8	7 019.2	292	7 371.9
N/A	Zinc (and its compounds)	674.3	0.1	192.3	6 051.5	6 927.3	219	6 739.2
108-88-3	Toluene	6 445.0	66.7	6.2	21.2	6 550.5	300	6 994.0
78-93-3	Methyl ethyl ketone	4 542.5	386.0	0.0	1.4	4 936.3	143	5 164.3
N/A	Nitrate ion in solution at pH ≥ 6.0	28.0	148.8	3 968.8	66.0	4 212.4	51	4 679.2
107-21-1	Ethylene glycol	246.2	565.9	21.9	2 691.4	3 530.4	165	4 887.2
67-64-1	Acetone	3 340.7	110.0	54.5	0.0	3 512.9	134	4 424.8
7664-39-3	Hydrogen fluoride	3 404.5	0.7	0.0	0.0	3 405.2	44	3 141.4
1332-21-4	Asbestos (friable form)	0.0	0.0	0.0	3 021.6	3 022.2	9	3 067.7
N/A	Manganese (and its compounds)	93.0	0.0	339.1	2 194.1	2 635.4	191	2 932.9
74-85-1	Ethylene	2 562.9	0.0	0.3	0.1	2 564.4	43	2 057.8
75-09-2	Dichloromethane	2 212.7	0.0	0.0	0.0	2 215.1	53	2 447.7
75-15-0	Carbon disulphide	2 195.2	0.0	0.0	0.0	2 196.1	26	3 094.1
N/A	Arsenic (and its compounds)	173.0	1 719.8	4.5	183.6	2 081.7	30	2 114.7
67-63-0	Isopropyl alcohol	2 043.9	3.0	0.0	0.0	2 055.5	166	2 179.6
110-82-7	Cyclohexane	1 993.7	0.3	2.0	0.3	1 999.1	84	3 303.6
N/A	Chromium (and its compounds)	51.5	2.4	21.8	1 876.5	1 959.9	135	955.9
N/A	Lead (and its compounds)	544.3	0.0	17.6	1 060.9	1 628.0	125	1 531.0
71-43-2	Benzene	1 475.5	103.2	1.7	0.5	1 585.8	100	1 773.2
50-00-0	Formaldehyde	1 237.3	40.3	167.6	0.0	1 448.1	86	1 424.5
N/A	Copper (and its compounds)	495.6	0.0	69.0	675.8	1 245.6	167	924.5
Total Largest On-site Releases		99 778.9	15 389.5	13 136.4	18 465.7	146 902.5	3 401	147 499.6
National Total		110 318.6	16 599.3	13 298.1	19 762.5	160 165.6	4 933	161 593.0
% of National Total		90.4	92.7	98.8	93.4	91.7	68.9	91.3
								68.6

- SIC 29 – Primary Metal Industries:
 - total on-site releases in 1997: 19 783 tonnes (109 facilities)
 - total on-site releases in 1998: 20 551 tonnes (115 facilities)
 - an increase of 768 tonnes (+3.9%) from 1997
- SIC 27 – Paper and Allied Products Industries:
 - total on-site releases in 1997: 19 904 tonnes (103 facilities)
 - total on-site releases in 1998: 20 526 tonnes (102 facilities)
 - an increase of 622 tonnes (+3.4%) from 1997
- SIC 07 – Crude Petroleum and Natural Gas Industries:
 - total on-site releases in 1997: 11 546 tonnes (69 facilities)
 - total on-site releases in 1998: 11 642 tonnes (76 facilities)
 - an increase of 96 tonnes (+0.8%) from 1997

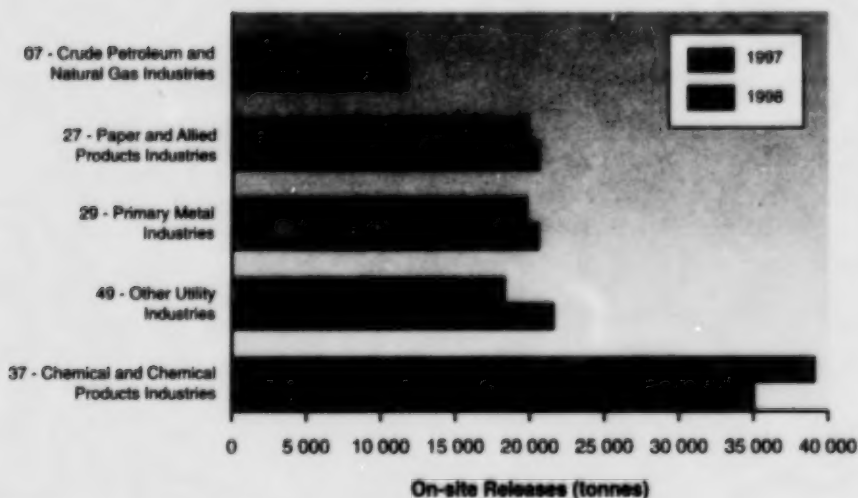


Figure 3
Industrial Sectors Reporting the Largest On-site Releases in 1998

In 1998, the Chemical and Chemical Products Industries reported the largest on-site releases. This sector also has the largest number of facilities – 330 in 1998, or about three times as many facilities as either the Paper and Allied Products Industries or the Primary Metal Industries. Over the past year, facilities in the Chemical and Chemical Products Industries sector have reduced releases by 4 097 tonnes (–10.5%), the largest decrease in on-site releases by a sector for 1998.

The Other Utility Industries sector reported 21 552 tonnes, the second largest releases on site in 1998. Releases from Other Utility Industries increased by 3 248 tonnes (+17.7%) from 1997. The increase is partly a result of greater reported releases to air of sulphuric acid and hydrochloric acid from power generation utilities across Canada, a result of greater energy production and improved testing and estimation methods. This industrial sector reported the largest increase in on-site releases for 1998.

2.2.3 On-site Releases by Facility in 1998

Appendix 2 presents the largest on-site releases of NPRI pollutants, by facility, in 1998 for each NPRI substance. A maximum of 10 facilities are listed for each substance, however, the total releases and number of reports for each pollutant listed are also provided. Facilities reporting releases of less than 0.5 tonnes, and pollutants with total releases less than 0.5 tonnes are not listed.

Tables 3 and 4 highlight five facilities reporting to the NPRI the largest relative decreases and increases of on-site releases of a single NPRI pollutant from 1997 to 1998, respectively. These tables do not include increases or decreases due to changes in estimation methodologies, if clearly specified by the facility in the comment field. All facilities shown below reported a relative change of greater than 500 tonnes for at least one NPRI pollutant from 1997 to 1998.

TABLE 3
FACILITIES REPORTING THE LARGEST DECREASE IN ON-SITE RELEASES FROM 1997 TO 1998

Facility	NPRI Pollutant and Reported Releases (tonnes)	Comments Provided by Facility
NPRI #2134 Agrium Products Inc. Redwater Fertilizer Operations Redwater/Municipal District of Sturgeon, AB	Ammonia (total) • 5 822 in 1997 • 4 199 in 1998 (decrease of 1 623 (-27.9%))	"...Redistillation of condensate in the urea plant resulted in a significant reduction in the amount of ammonia disposed of via the deepwell. Reductions in the amount of fertilizer fines disposed of via landfill were made in 1998 by increasing the amount of offspec product resale effort..."
NPRI #0444 Inco Limited Copper Cliff Smelter Complex Copper Cliff, ON	Sulphuric acid • 3 894 in 1997 • 2 796 in 1998 (decrease of 1 098 (-28.2%))	No comments provided by facility.
NPRI #4138 Amoco Canada Petroleum Co. Ltd. West Whitecourt Plant Whitecourt, AB	Carbon disulphide • 1 054 in 1997 • 92 in 1998 (decrease of 962 (-91.3%))	"...Carbon disulphide is formed in the sulphur recovery units and is not completely combusted in the tail gas incinerator..."
NPRI #4700 Nova Chemicals Ltd. St. Clair River Site Corunna, ON	Cyclohexane • 1 960 in 1997 • 1 058 in 1998 (decrease of 903 (-46.0%))	"...New production equipment which recovers and recycles cyclohexane was commissioned in early 98..."
NPRI #1162 Celanese Canada Inc. Edmonton Facility Edmonton, AB	Acetone • 1 414 in 1997 • 732 in 1998 (decrease of 683 (-48.3%))	No comments provided by facility.

TABLE 4
FACILITIES REPORTING THE LARGEST INCREASE IN ON-SITE RELEASES FROM 1997 TO 1998*

Facility	NPRI Pollutant and Reported Releases (tonnes)	Comments Provided by Facility
NPRI #0444 Inco Limited Copper Cliff Smelter Complex Copper Cliff, ON	Chromium and its compounds • 649 in 1997 • 1 545 in 1998 (increase of 896 (+138.1%))	"...These chrome releases are in the form of spent chrome-magnesite refractory brick which is stockpiled for processing to recover infused metals. The manufacturer indicates the chrome as the III form..."
NPRI #1861 Ontario Power Generation Inc. Nanticoke G.S. Nanticoke, ON	Hydrochloric acid • 3 344 in 1997 • 4 234 in 1998 (increase of 890 (+26.6%))	No comments provided by facility.
NPRI #3649 Ispat Sidbec Inc. Acierie Contrecoeur, QC	Zinc and its compounds • 1 836 in 1997 • 2 707 in 1998 (increase of 871 (+47.4%))	"...les poussières d'aciérage contenant du zinc sont entreposées sur nos terrains dans des cellules avec membrane synthétique..."
NPRI #2515 Simplot Canada Limited Brandon, MB	Ammonia (total) • 1 023 in 1997 • 1 734 in 1998 (increase of 711 (+69.5%))	"...New Ammonia Plant was finished and ran for part of 1998 along with the existing two ammonia plants. They have subsequently been shut down and the ammonia emission numbers have decreased. Our #1 Nitric Acid plant utilized a purge gas stream from the old ammonia plants as a fuel source. This caused approximately 240 tonnes of ammonia emission annually. This practice has been stopped..."
NPRI #3269 Agrium Inc. Calgary, AB	Ammonia (total) • 1 352 in 1997 • 1 961 in 1998 (increase of 609 (+45.1%))	No comments provided by facility.

* This table excludes facilities reporting a pollutant for the first time in 1998.

2.3 Off-site Transfers for Disposal in 1998

Table 1 in Section 2.1 provides the overview of the quantities transferred off site for either treatment prior to final disposal or for final disposal. In 1998, facilities across Canada reported off-site transfers for disposal totalling 88 489 tonnes, a decrease of 9 610 tonnes (-9.8%) from 1997.

Off-site transfers for treatment prior to final disposal accounted for 34 575 tonnes (39.1% of total transfers), a decrease of 5 278 tonnes (-13.2%) from 1997. Off-site transfers sent directly to final disposal accounted for 53 914 tonnes (60.9% of total transfers), a decrease of 4 336 tonnes (-7.4%) from 1997.

The following breakdown for off-site transfers was reported by facilities in 1998:

- Off-site transfers for treatment prior to final disposal in 1998:
 - Physical: 2 271 tonnes (2.6% of total transfers for disposal)
 - Chemical: 8 662 tonnes (9.8% of total transfers for disposal)
 - Biological: 2 632 tonnes (3.0% of total transfers for disposal)
 - Incineration: 12 236 tonnes (13.8% of total transfers for disposal)
 - Municipal sewage treatment plant (MSTP): 8 774 tonnes (9.9% of total transfers for disposal)
- Off-site transfers for final disposal in 1998:
 - Landfill: 45 095 tonnes (51.0% of total transfers for disposal)
 - Storage: 3 933 tonnes (4.4% of total transfers for disposal)
 - Underground injection: 4 359 tonnes (4.9% of total transfers for disposal)
 - Land treatment: 528 tonnes (0.6% of total transfers for disposal)

Overall, four categories of off-site transfers accounted for 74 766 tonnes (84.5%) in 1998 – landfill, incineration, MSTP and chemical treatment. The remaining off-site transfer categories accounted for 13 723 tonnes (15.5%) in 1998.

Figures 4 and 5 illustrate the relative contribution of off-site transfers for treatment prior to final disposal and for final disposal, respectively.

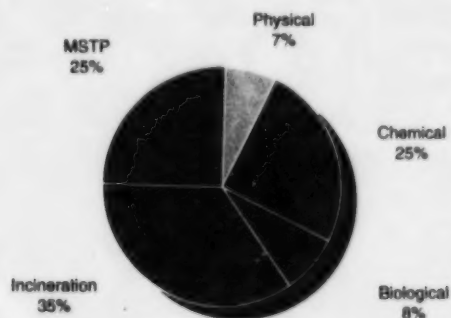


Figure 4
Off-site Transfers for Treatment Prior to Final Disposal in 1998

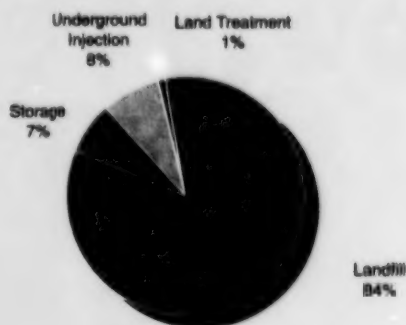


Figure 5
Off-site Transfers for Final Disposal in 1998

2.3.1 Off-site Transfers for Disposal in 1998 – 25 NPRI Pollutants Transferred Off Site in the Largest Quantities

Table 5 provides details on the 25 pollutants transferred off site in the largest quantities in 1998. These pollutants accounted for 84 947 tonnes or 96.0% of the total off-site transfers for disposal in 1998.

For 1998, the five pollutants transferred off site in the largest quantities were:

- Zinc (and its compounds) (26 174 tonnes)
- Manganese (and its compounds) (7 202 tonnes)
- Sulphuric acid (5 732 tonnes)
- Nitrate ion (in solution at pH \geq 6.0) (5 087 tonnes)
- Hydrochloric acid (5 015 tonnes)

In comparison, the following pollutants were transferred off site in the largest quantities in 1997:

- Zinc (and its compounds) (35 593 tonnes)
- Manganese (and its compounds) (8 027 tonnes)
- Sulphuric acid (5 816 tonnes)
- Nitrate ion (in solution at pH \geq 6.0) (5 349 tonnes)
- Xylene (mixed isomers) (4 923 tonnes)
- Toluene (4 821 tonnes)
- Methanol (3 831 tonnes)
- Hydrochloric acid (3 785 tonnes)

The largest change is a decrease of 9 419 tonnes in transfers off site for disposal of zinc and its compounds, across a broad range of sectors and facilities. The reason for this decrease is not known; analysis is being carried out.

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TABLE 5
OFF-SITE TRANSFERS FOR DISPOSAL IN 1998 - 25 NPRI POLLUTANTS TRANSFERRED OFF SITE IN THE LARGEST QUANTITIES
(TONNES)

CAS No.	Pollutant	Physical	Chemical	Biological	Incineration	MSTP	Landfill	Storage	Underground Injection	Land Treatment	Total	No. of Reports
N/A	Zinc (and its compounds)	373.4	2 052.7	0.0	38.7	8.7	23 483.0	136.8	75.5	5.1	26 174.0	387
N/A	Manganese (and its compounds)	70.6	360.5	0.0	0.5	4.5	6 350.2	378.8	0.0	36.9	7 202.0	316
7664-93-9	Sulphuric acid	719.1	2 361.7	0.1	70.3	143.8	506.7	0.1	1 930.1	0.0	5 731.8	435
N/A	Nitrate ion in solution at pH ≥ 6.0	0.0	22.0	0.0	0.0	4 416.7	104.5	0.0	543.8	0.2	5 087.1	82
7647-01-0	Hydrochloric acid	322.1	2 637.0	0.0	30.1	1 791.2	6.8	0.1	12.3	215.0	5 014.6	287
1330-20-7	Xylene (mixed isomers)	24.1	113.9	3.4	1 452.8	0.1	1 789.2	1 355.2	3.5	0.0	4 742.2	328
67-56-1	Methanol	0.0	13.5	1 480.5	1 256.5	561.2	193.6	9.8	1 074.6	3.3	4 593.1	354
108-88-3	Toluene	23.2	68.6	4.2	2 682.7	1.5	843.8	794.6	4.5	0.0	4 423.0	340
N/A	Lead (and its compounds)	0.5	206.8	0.0	46.5	2.9	2 991.0	79.4	0.1	0.0	3 272.2	193
N/A	Chromium (and its compounds)	501.2	220.1	0.0	56.5	3.5	1 949.3	78.1	250.0	0.1	3 058.7	279
1332-21-4	Asbestos (friable form)	0.0	0.0	0.0	0.0	0.0	2 247.5	0.0	0.0	0.0	2 247.5	51
107-21-1	Ethylene glycol	37.1	41.0	881.3	253.8	597.5	67.7	47.5	129.7	0.0	2 055.7	282
67-64-1	Acetone	14.8	0.0	7.0	1 257.9	45.4	179.1	295.1	0.0	0.0	1 799.3	165
N/A	Copper (and its compounds)	4.5	68.7	0.0	5.3	4.9	1 334.5	65.9	0.0	0.0	1 483.8	339
78-93-3	Methyl ethyl ketone	9.7	26.3	0.0	799.0	17.1	320.9	271.3	0.1	0.0	1 444.4	167
67-63-0	Isopropyl alcohol	0.4	3.0	3.6	993.6	151.3	73.9	105.3	11.8	0.0	1 342.8	199
N/A	Ammonia (total)	0.0	39.0	65.6	38.0	624.7	64.0	0.9	195.6	173.5	1 201.2	309
110-82-7	Cyclohexane	0.0	0.0	0.0	731.2	0.0	0.0	0.0	0.3	0.0	731.5	90
N/A	Nickel (and its compounds)	91.8	123.5	0.0	1.3	4.3	362.8	35.6	18.6	0.4	638.4	201
71-36-3	n-Butyl alcohol	1.0	8.4	22.2	515.6	16.5	2.9	4.4	0.0	0.0	571.0	84
7664-38-2	Phosphoric acid	0.0	41.5	0.0	0.2	51.8	459.8	0.1	0.5	0.0	553.9	223
50-00-0	Formaldehyde	0.0	2.6	66.3	103.7	23.5	251.8	0.2	0.0	0.8	448.9	92
108-95-2	Phenol (and its salts)	0.0	4.4	61.4	190.4	157.2	13.9	0.4	1.0	0.0	428.7	66
106-10-1	Methyl isobutyl ketone	0.7	0.2	0.1	119.4	0.0	100.0	104.2	0.0	0.0	324.7	73
7429-90-5	Aluminum (fume or dust)	0.0	0.0	0.0	0.3	0.0	243.5	0.0	0.0	77.6	321.3	46
Total Largest Off-site Transfers		2 194.2	8 415.4	2 595.8	10 644.2	8 628.1	43 940.4	3 763.8	4 251.9	512.9	84 946.6	5 388
National Total		2 270.9	8 661.8	2 632.2	12 235.6	8 774.4	45 094.8	3 933.3	4 358.6	527.5	88 489.2	7 448
% of National Total		96.6	97.2	98.6	87.0	98.3	97.4	95.7	97.6	97.2	96.0	72.3



TABLE 5
OFF-SITE TRANSFERS FOR DISPOSAL IN 1998 – 25 NPRI POLLUTANTS TRANSFERRED OFF SITE IN THE LARGEST QUANTITIES
(TONNES)

CAS No.	Pollutant	Physical	Chemical	Biological	Incineration	MSTP	Landfill	Storage	Underground Injection	Land Treatment	Total	No. of Reports
N/A	Zinc (and its compounds)	373.4	2 052.7	0.0	38.7	8.7	23 483.0	136.8	75.5	5.1	26 174.0	387
N/A	Manganese (and its compounds)	70.6	360.5	0.0	0.5	4.5	6 350.2	378.8	0.0	36.9	7 202.0	316
7664-93-9	Sulphuric acid	719.1	2 361.7	0.1	70.3	143.8	506.7	0.1	1 930.1	0.0	5 731.8	435
N/A	Nitrate ion in solution at pH ≥ 6.0	0.0	22.0	0.0	0.0	4 416.7	104.5	0.0	543.8	0.2	5 087.1	82
7647-01-0	Hydrochloric acid	322.1	2 637.0	0.0	30.1	1 791.2	6.8	0.1	12.3	215.0	5 014.6	287
1330-20-7	Xylene (mixed isomers)	24.1	113.9	3.4	1 452.8	0.1	1 789.2	1 355.2	3.5	0.0	4 742.2	328
67-56-1	Methanol	0.0	13.5	1 480.5	1 256.5	561.2	193.6	9.8	1 074.6	3.3	4 593.1	354
108-88-3	Toluene	23.2	68.6	4.2	2 682.7	1.5	843.8	794.6	4.5	0.0	4 423.0	340
N/A	Lead (and its compounds)	0.5	206.8	0.0	46.5	2.9	2 991.0	79.4	0.1	0.0	3 327.2	193
N/A	Chromium (and its compounds)	501.2	220.1	0.0	56.5	3.5	1 949.3	78.1	250.0	0.1	3 058.7	279
1332-21-4	Asbestos (friable form)	0.0	0.0	0.0	0.0	0.0	2 247.5	0.0	0.0	0.0	2 247.5	51
107-21-1	Ethylene glycol	37.1	41.0	881.3	253.8	597.5	67.7	47.5	129.7	0.0	2 055.7	282
67-64-1	Acetone	14.8	0.0	7.0	1 257.9	45.4	179.1	295.1	0.0	0.0	1 799.3	165
N/A	Copper (and its compounds)	4.5	68.7	0.0	5.3	4.9	1 334.5	65.9	0.0	0.0	1 483.8	339
78-93-3	Methyl ethyl ketone	9.7	26.3	0.0	799.0	17.1	320.9	271.3	0.1	0.0	1 444.4	167
67-63-0	Isopropyl alcohol	0.4	3.0	3.6	993.6	151.3	73.9	105.3	11.8	0.0	1 342.8	199
N/A	Ammonia (total)	0.0	39.0	65.6	38.0	624.7	64.0	0.9	195.6	173.5	1 201.2	309
110-82-7	Cyclohexane	0.0	0.0	0.0	731.2	0.0	0.0	0.0	0.3	0.0	731.5	90
N/A	Nickel (and its compounds)	91.8	123.5	0.0	1.3	4.3	362.8	35.6	18.6	0.4	638.4	201
71-36-3	n-Butyl alcohol	1.0	8.4	22.2	515.6	16.5	2.9	4.4	0.0	0.0	571.0	84
7664-38-2	Phosphoric acid	0.0	41.5	0.0	0.2	51.8	459.8	0.1	0.5	0.0	553.9	223
50-00-0	Formaldehyde	0.0	2.6	66.3	103.7	23.5	251.8	0.2	0.0	0.8	448.9	92
108-95-2	Phenol (and its salts)	0.0	4.4	61.4	190.4	157.2	13.9	0.4	1.0	0.0	428.7	66
108-10-1	Methyl isobutyl ketone	0.7	0.2	0.1	119.4	0.0	100.0	104.2	0.0	0.0	324.7	73
7429-90-5	Aluminum (fume or dust)	0.0	0.0	0.0	0.3	0.0	243.5	0.0	0.0	77.6	321.3	46
Total Largest Off-site Transfers		2 194.2	8 415.4	2 595.8	10 644.2	8 628.1	43 940.4	3 763.8	4 251.9	512.9	84 946.6	5 388
National Total		2 270.9	8 661.8	2 632.2	12 235.6	8 774.4	45 094.8	3 933.3	4 356.6	527.5	88 409.2	7 448
% of National Total		96.6	97.2	98.6	87.0	98.3	97.4	95.7	97.6	97.2	96.0	72.3

2.3.2 Off-site Transfers for Disposal by Industrial Sector in 1998

Figure 6 presents the five industrial sectors that reported the largest off-site transfers for disposal by sector in 1997 and 1998. These sectors accounted for more than 81% of total off-site transfers in 1998. The sectors are identified by Standard Industrial Classification (SIC) codes, which are numerical identifiers for different types of businesses and industries. The NPRI also collects information using the North American Industry Classification System (NAICS) codes and will likely use NAICS codes to identify sectors in subsequent annual reports.

The following listing compares all 1997 and 1998 off-site transfers reported by these five industrial sectors:

- SIC 29 – Primary Metal Industries:
 - total off-site transfers in 1997: 28 419 tonnes (63 facilities)
 - total off-site transfers in 1998: 23 950 tonnes (68 facilities)
– a decrease of 4 469 tonnes (–15.7%) from 1997
- SIC 77 – Business Service Industries:
 - total off-site transfers in 1997: 22 452 tonnes (6 facilities)
 - total off-site transfers in 1998: 20 300 tonnes (7 facilities)
– a decrease of 2 152 tonnes (–9.6%) from 1997
- SIC 37 – Chemical and Chemical Products Industries:
 - total off-site transfers in 1997: 16 856 tonnes (218 facilities)
 - total off-site transfers in 1998: 17 081 tonnes (223 facilities)
– an increase of 225 tonnes (+1.3%) from 1997
- SIC 30 – Fabricated Metal Products Industries (except Machinery and Transportation Equipment Industries):
 - total off-site transfers in 1997: 5 035 tonnes (94 facilities)
 - total off-site transfers in 1998: 6 623 tonnes (84 facilities)
– an increase of 1 588 tonnes (+31.5%) from 1997
- SIC 49 – Other Utility Industries:
 - total off-site transfers in 1997: 7 750 tonnes (24 facilities)
 - total off-site transfers in 1998: 3 917 tonnes (20 facilities)
– a decrease of 3 833 tonnes (–49.5%) from 1997

The Business Service Industries classification includes six waste-handling or -treatment facilities, which accounts for its relatively high level of transfers for disposal.

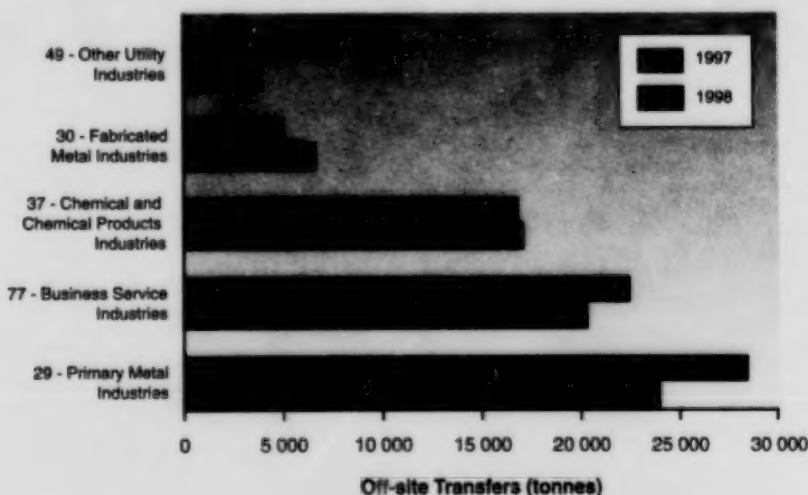


Figure 6
Industrial Sectors Reporting the Largest
Off-site Transfers for Disposal in 1997 and 1998

2.3.3 Off-site Transfers for Disposal by Facility in 1998

Tables 6 and 7 highlight five facilities reporting the largest relative decreases and increases in off-site transfers from 1997 to 1998, respectively. These facility listings are based on the largest change in off-site transfers by specific pollutant reported to the NPRI from 1997 to 1998. These tables do not include increases or decreases due to changes in estimation methodologies, if clearly specified by the facility in the comment field. All facilities shown reported a relative change of greater than 250 tonnes for at least one NPRI pollutant from 1997 to 1998.

TABLE 6
FACILITIES REPORTING THE LARGEST DECREASE IN OFF-SITE TRANSFERS FOR DISPOSAL FROM 1997 TO 1998

Facility	NPRI Pollutant and Reported Off-site Transfers (tonnes)	Comments Provided by Facility
NPRI #1698 New Brunswick Power Belledune Thermal Generating Station Belledune, NB	Zinc (and its compounds) • 3 264 in 1997 • 27 in 1998 (decrease of 3 237 (-99.2%))	"...Material is sent to an NBDOE approved landfill..."
NPRI #5645 Philip Enterprises Inc. Parkdale Avenue Facility Hamilton, ON	Zinc (and its compounds) • 4 518 in 1997 • 2 384 in 1998 (decrease of 2 134 (-47.2%))	No comments provided by facility.
NPRI #3855 Lake Erie Steel Company Nanticoke, ON	Zinc (and its compounds) • 1 480 in 1997 • 0 in 1998 (decrease of 1 480)	"...Material is being stored for future recycling not landfill..."
NPRI #3713 Dofasco Inc. Hamilton, ON	Zinc (and its compounds) • 5 759 in 1997 • 4 756 in 1998 (decrease of 1 002 (-17.4%))	No comments provided by facility.
NPRI #4328 Sorveco, Société en commandite Coteau-du-Lac, QC	Zinc (and its compounds) • 841 in 1997 • 0 in 1998 (decrease of 841)	No comments provided by facility.

TABLE 7
FACILITIES REPORTING THE LARGEST INCREASE IN OFF-SITE TRANSFERS FOR DISPOSAL FROM 1997 TO 1998*

Facility	NPRI Pollutant and Reported Off-site Transfers (tonnes)	Comments Provided by Facility
NPRI #5645 Philip Enterprises Inc. Parkdale Avenue Facility Hamilton, ON	Xylene (mixed isomers) • 931 in 1997 • 1 902 in 1998 (increase of 971 (+104.4%))	No comments provided by facility.
NPRI #4984 La Corporation Corbec Division Québec Québec, QC	Hydrochloric acid • 367 in 1997 • 1 190 in 1998 (increase of 823 (+224.3%))	No comments provided by facility.
NPRI #5645 Philip Enterprises Inc. Parkdale Avenue Facility Hamilton, ON	Toluene • 433 in 1997 • 884 in 1998 (increase of 451 (+104.2%))	No comments provided by facility.
NPRI #4988 Corbec Corporation Montreal Division Lachine, QC	Sulphuric acid • 89 in 1997 • 526 in 1998 (increase of 437 (+491.2%))	No comments provided by facility.
NPRI #1162 Celanese Canada Inc. Edmonton Facility Edmonton, AB	Methanol • 0.3 in 1997 • 280 in 1998 (increase of 280)	No comments provided by facility.

* This table excludes facilities reporting a pollutant for the first time in 1998.

2.4 Off-site Transfers for Recycling in 1998

In previous years, reporting of recycling activities was optional. As a result of public consultations in 1996, facilities now must report the quantities of substances transferred off site for recycling, the nature of the recycling activity and the name and address of the receiving facility. No year-to-year comparisons are made because only an incomplete picture of the quantities transferred off site for recycling exists for 1997. This section considers separately recycling and energy-recovery activities in 1998.

Generally, materials transferred off site for recycling include those sold to recyclers, such as metal shavings or turnings, material sent off site for processing, cleaning or reclamation and returned to the facility, and those materials sent back to suppliers for credit or payment. Energy recovery is applicable only when the energy recovered from combustion is used as an alternative to fossil fuels or other forms of energy.

In 1998, facilities across Canada reported 245 798 tonnes transferred off site for recycling (excluding energy recovery). Figure 7 shows the breakdown by recycling activity type in 1998.

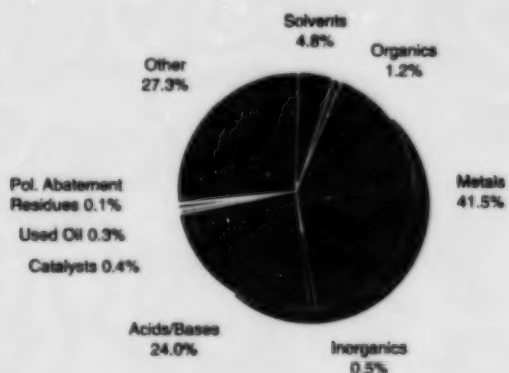


Figure 7
Recycling Activity by Type in 1998

Table 8 provides a summary of 10 NPRI substances transferred off site for recycling in the largest quantities in 1998. These substances contributed 229 191 tonnes (93.2%) to the overall total for recycling (excluding energy recovery) for 1998.

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TABLE 8
OFF-SITE TRANSFERS FOR RECYCLING IN 1998 - 10 NPRI SUBSTANCES TRANSFERRED IN THE LARGEST QUANTITIES (TONNES)

CAS No.	Substance	Solvents	Organics	Metals	Inorganics	Acids or Bases	Catalysts	Pollution Abatement		Total	No. of Reports
								Residues	Used Oil		
7664-93-9	Sulphuric acid	0.0	0.0	341.6	4.7	57 849.6	0.0	0.0	775.5	3 279.9	62 251.3
N/A	Zinc (and its compounds)	0.3	2.8	37 270.9	3.9	0.0	0.0	147.4	12.3	2 605.6	40 043.3
N/A	Chromium (and its compounds)	0.0	0.0	8 378.7	702.8	0.0	0.0	5.6	0.0	26 651.3	35 738.4
N/A	Copper (and its compounds)	0.0	0.0	18 011.8	56.8	0.0	0.0	2.6	0.0	5 156.3	23 227.4
N/A	Manganese (and its compounds)	0.0	0.0	15 175.2	31.8	0.0	0.0	115.9	0.0	5 933.3	21 256.2
N/A	Nickel (and its compounds)	0.0	0.0	4 051.6	51.6	0.0	197.1	4.9	0.0	16 194.6	20 499.7
N/A	Lead (and its compounds)	0.0	1.4	14 473.6	0.0	0.0	0.0	24.1	0.0	861.8	15 360.9
1330-20-7	Xylene (mixed isomers)	3 724.9	23.4	0.0	0.0	0.0	0.0	0.3	0.0	400.3	4 148.9
108-88-3	Toluene	2 198.0	20.1	0.0	0.0	0.0	0.0	0.2	0.0	1 894.2	4 112.6
107-21-1	Ethylene glycol	4.9	1 904.3	0.0	0.0	0.0	0.0	0.0	2.5	641.0	2 552.7
Total Largest Transfers for Recycling		5 928.2	1 952.0	97 703.3	851.5	57 849.6	197.1	301.0	790.3	63 618.3	229 191.4
National Total		11 735.9	2 930.4	101 974.6	1 292.1	58 878.3	900.4	306.6	794.3	66 985.6	245 798.3
% of National Total		50.5	66.6	95.8	65.9	98.3	21.9	98.2	99.5	95.0	93.2



TABLE 8
OFF-SITE TRANSFERS FOR RECYCLING IN 1998 - 10 NPRI SUBSTANCES TRANSFERRED IN THE LARGEST QUANTITIES (TONNES)

CAS No.	Substance	Solvents	Organics	Metals	Inorganics	Acids or Bases	Pollution Abatement			Total	No. of Reports	
							Catalysts	Residues	Used Oil			
7664-93-9	Sulphuric acid	0.0	0.0	341.6	4.7	57 849.6	0.0	0.0	775.5	3 279.9	62 251.3	28
N/A	Zinc (and its compounds)	0.3	2.8	37 270.9	3.9	0.0	0.0	147.4	12.3	2 605.6	40 043.3	158
N/A	Chromium (and its compounds)	0.0	0.0	8 378.7	702.8	0.0	0.0	5.6	0.0	26 651.3	35 738.4	120
N/A	Copper (and its compounds)	0.0	0.0	18 011.8	56.8	0.0	0.0	2.6	0.0	5 156.3	23 227.4	160
N/A	Manganese (and its compounds)	0.0	0.0	15 175.2	31.8	0.0	0.0	115.9	0.0	5 933.3	21 256.2	166
N/A	Nickel (and its compounds)	0.0	0.0	4 051.6	51.6	0.0	197.1	4.9	0.0	16 194.6	20 499.7	108
N/A	Lead (and its compounds)	0.0	1.4	14 473.6	0.0	0.0	0.0	24.1	0.0	861.8	15 360.9	80
1330-20-7	Xylene (mixed isomers)	3 724.9	23.4	0.0	0.0	0.0	0.0	0.3	0.0	400.3	4 148.9	86
108-88-3	Toluene	2 198.0	20.1	0.0	0.0	0.0	0.0	0.2	0.0	1 894.2	4 112.6	79
107-21-1	Ethylene glycol	4.9	1 904.3	0.0	0.0	0.0	0.0	0.0	2.5	641.0	2 552.7	37
Total Largest Transfers for Recycling		5 928.2	1 952.0	97 703.3	851.5	57 849.6	197.1	301.0	790.3	63 618.3	229 191.4	1 022
National Total		11 735.9	2 930.4	101 974.6	1 292.1	58 878.3	900.4	306.6	794.3	66 985.6	245 798.3	1 588
% of National Total		50.5	66.6	95.8	65.9	98.3	21.9	98.2	99.5	95.0	93.2	64.4

In 1998, facilities across Canada reported total transfers off site for energy recovery of 13 078 tonnes. Table 9 provides a summary of 10 NPRI substances transferred off site for energy recovery in the largest quantities in 1998. These substances contributed 11 917 tonnes (91.1%) to the overall total for energy recovery in 1998.

TABLE 9
OFF-SITE TRANSFERS FOR ENERGY RECOVERY IN 1998 – 10 NPRI
POLLUTANTS TRANSFERRED IN THE LARGEST QUANTITIES (TONNES)

CAS No.	Substance	Energy Recovery	No. of Reports
1330-20-7	Xylene (mixed isomers)	5 364.2	50
108-88-3	Toluene	3 077.5	43
78-93-3	Methyl ethyl ketone	1 205.8	31
67-64-1	Acetone	570.3	17
67-63-0	Isopropyl alcohol	318.4	28
75-09-2	Dichloromethane	311.3	10
100-41-4	Ethyl benzene	307.2	14
108-10-1	Methyl isobutyl ketone	282.9	13
108-05-4	Vinyl acetate	271.9	2
67-56-1	Methanol	207.5	21
Total Largest Transfers for Energy Recovery		11 917.1	229
National Total		13 078.1	334
% of National Total		91.1	68.6

2.5 NPRI-listed, CEPA-toxic and Carcinogenic Pollutants in 1998

In 1998, there were 25 CEPA-toxic and carcinogenic substances on the NPRI list, as shown in Table 10. Benzyl chloride was added this year after it was classified in 1999 by the International Agency for Research on Cancer (IARC) as a probable human carcinogen. Acrylonitrile was removed from the list of NPRI-listed, CEPA-toxic and carcinogenic substances in 1997; it was re-evaluated by the IARC and is no longer classified as a probable human carcinogen.

TABLE 10
CEPA-TOXIC AND CARCINOGENIC POLLUTANTS ON THE NPRI IN 1998

CAS No.	Pollutant	CEPA Schedule 1 ¹	PSL 1 CEPA-toxic ²	IARC ³	ARET
79-06-1	Acrylamide			2A	B3
N/A	Arsenic (and its compounds)		Y	1	
1332-21-4	Asbestos (friable form)	Y		1	B2
71-43-2	Benzene		Y	1	B3
100-44-7	Benzyl chloride			2A	B2
117-81-7	Bis(2-ethylhexyl) phthalate		Y		B1
106-99-0	1,3-Butadiene			2A	B3
N/A	Cadmium (and its compounds)		Y	1	
56-23-5	Carbon tetrachloride	Y			B2
N/A	Chromium (and its compounds)		Y	1	
107-06-2	1,2-Dichloroethane		Y		B2
75-09-2	Dichloromethane		Y		B2
64-67-5	Diethyl sulphate			2A	
77-78-1	Dimethyl sulphate			2A	
106-89-8	Epichlorohydrin			2A	B3
75-21-8	Ethylene oxide			1	B2
50-00-0	Formaldehyde			2A	B3
N/A	Lead (and its compounds)	Y			
N/A	Mercury (and its compounds)	Y			
101-14-4	p,p'-Methylenebis(2-chloroaniline)			2A	A1
N/A	Nickel (and its compounds)		Y	1	
96-09-3	Styrene oxide			2A	
127-18-4	Tetrachloroethylene		Y	2A	B2
79-01-6	Trichloroethylene		Y	2A	B3
75-01-4	Vinyl chloride	Y		1	

1 Pollutants listed on Schedule 1 List of Toxic Substances of the CEPA

2 Pollutants from the first Priority Substances List (PSL 1) assessed as toxic under Section 11 of the CEPA. No pollutants from the second Priority Substances List (PSL 2) are yet on this list, as none of the substances for which final PSL 2 assessments were available, as of March 29, 2000, were classified as CEPA-toxic.

3 Carcinogens classified as Carcinogenic (1) or Probably Carcinogenic (2A) by the International Agency for Research on Cancer (IARC)

A review of 1997 and 1998 data for NPRI-listed, CEPA-toxic and carcinogenic pollutants shows:

- Number of facilities reporting NPRI-listed, CEPA-toxic and carcinogenic pollutants:
 - 778 in 1997
 - 786 in 1998 (an increase of eight facilities (+1.0%) from 1997)
- Number of pollutant reports submitted for NPRI-listed, CEPA-toxic and carcinogenic pollutants:
 - 1 277 in 1997
 - 1 275 in 1998 (a decrease of two reports (-0.2%) from 1997)

In 1998, facilities across Canada reported total transfers off site for energy recovery of 13 078 tonnes. Table 9 provides a summary of 10 NPRI substances transferred off site for energy recovery in the largest quantities in 1998. These substances contributed 11 917 tonnes (91.1%) to the overall total for energy recovery in 1998.

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67-63-0	Isopropyl alcohol	318.4	28
75-09-2	Dichloromethane	311.3	10
100-41-4	Ethyl benzene	307.2	14
108-10-1	Methyl isobutyl ketone	282.9	13
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N/A	Arsenic (and its compounds)		Y	1	
1332-21-4	Asbestos (friable form)	Y		1	B2
71-43-2	Benzene		Y	1	B3
100-44-7	Benzyl chloride			2A	B2
117-81-7	Bis(2-ethylhexyl) phthalate		Y		B1
106-99-0	1,3-Butadiene			2A	B3
N/A	Cadmium (and its compounds)		Y	1	
56-23-5	Carbon tetrachloride	Y			B2
N/A	Chromium (and its compounds)		Y	1	
107-06-2	1,2-Dichloroethane		Y		B2
75-09-2	Dichloromethane		Y		B2
64-67-5	Diethyl sulphate			2A	
77-78-1	Dimethyl sulphate			2A	
106-89-8	Epichlorohydrin			2A	B3
75-21-8	Ethylene oxide			1	B2
50-00-0	Formaldehyde			2A	B3
N/A	Lead (and its compounds)	Y			
N/A	Mercury (and its compounds)	Y			
101-14-4	p,p'-Methylenebis(2-chloroaniline)			2A	A1
N/A	Nickel (and its compounds)		Y	1	
96-09-3	Styrene oxide			2A	
127-18-4	Tetrachloroethylene		Y	2A	B2
79-01-6	Trichloroethylene		Y	2A	B3
75-01-4	Vinyl chloride	Y		1	

1 Pollutants listed on Schedule 1 List of Toxic Substances of the CEPA

2 Pollutants from the first Priority Substances List (PSL 1) assessed as toxic under Section 11 of the CEPA. No pollutants from the second PSL (PSL 2) are yet on this list, as none of the substances for which final PSL 2 assessments were available, as of March 29, 2000, were classified as CEPA-toxic.

3 Carcinogens classified as Carcinogenic (1) or Probably Carcinogenic (2A) by the International Agency for Research on Cancer (IARC)

A review of 1997 and 1998 data for NPRI-listed, CEPA-toxic and carcinogenic pollutants shows:

- Number of facilities reporting NPRI-listed, CEPA-toxic and carcinogenic pollutants:
 - 778 in 1997
 - 786 in 1998 (an increase of eight facilities (+1.0%) from 1997)
- Number of pollutant reports submitted for NPRI-listed, CEPA-toxic and carcinogenic pollutants:
 - 1 277 in 1997
 - 1 275 in 1998 (a decrease of two reports (-0.2%) from 1997)

2.5.1 On-site Releases of NPRI-listed, CEPA-toxic and Carcinogenic Pollutants in 1998

In 1998, on-site releases of all NPRI pollutants totalled 160 166 tonnes. Table 11 shows that on-site releases of NPRI-listed, CEPA-toxic and carcinogenic pollutants totalled 15 156 tonnes in 1997 and 15 844 tonnes in 1998 (an increase of 688 tonnes or 4.5%). The contribution of these pollutants to the overall national total in 1998 was 9.9%.

Several NPRI-listed, CEPA-toxic and carcinogenic pollutants are groups rather than single substances, such as arsenic and its compounds, nickel and its compounds and chromium and its compounds. In most cases, the most commonly released forms of these compounds were determined to be toxic under the CEPA as a result of a priority substance assessment.

For chromium and its compounds, however, the most common form is trivalent chromium, which is neither CEPA-toxic nor carcinogenic as defined by the International Agency for Research on Cancer. Only the compound hexavalent chromium was determined to be CEPA-toxic. Trivalent chromium may be converted, under some conditions, to hexavalent chromium. Since the NPRI typically has no means of identifying which chromium compounds are released, all reported releases of chromium and its compounds are included in the NPRI-listed, CEPA-toxic and carcinogenic pollutants for the analyses in this section of the report.

One facility, Inco Limited (NPRI #0444), Copper Cliff, ON, released 1 545 tonnes of chromium and its compounds in 1998, an increase of 896 tonnes (+138.1%) since 1997. This release to land, in the form of spent chrome-magnesite refractory brick which had been processed to recover infused metals and then landfilled on site, accounts for nearly 10% of total on-site releases of NPRI-listed, CEPA-toxic and carcinogenic pollutants in 1998.

The facility commented that the pollutant released was trivalent chromium, not hexavalent chromium. On-site releases of NPRI-listed, CEPA-toxic and carcinogenic pollutants would have decreased by 207 tonnes (-1.4%) since 1997 if this facility's releases of chromium and its compounds were removed from the analysis.

In 1998, on-site releases of NPRI-listed, CEPA-toxic and carcinogenic pollutants were reported as releases to:

- Air: 7 324 tonnes (a decrease of 553 tonnes (-7.0%) since 1997)
- Underground injection: 1 866 tonnes (a decrease of 61 tonnes (-3.1%) since 1997)
- Land: 6 349 tonnes (an increase of 1 205 tonnes (+23.4%) since 1997)
- Water: 271 tonnes (an increase of 101 tonnes (+59.1%) since 1997)

As noted above, one facility accounted for 896 tonnes of the increased releases to land of NPRI-listed, CEPA-toxic and carcinogenic pollutants.

Figure 8 provides an overview of on-site releases, by environmental media, of NPRI-listed, CEPA-toxic and carcinogenic pollutants in 1998.

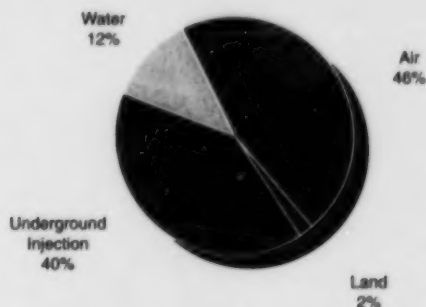


Figure 8
On-site Releases of NPRI-listed, CEPA-toxic and Carcinogenic Substances in 1998

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TABLE 11
NATIONAL SUMMARY OF NPRI-LISTED, CEPA-TOXIC AND
CARCINOGENIC POLLUTANT INFORMATION (1997-1998)

	1997	1998	Change (1997-1998)	% Change (1997-1998)
Total Facilities	778	786	8	1.0
Total Reports	1 277	1 275	-2	-0.2
Pollutants Reported	24	24	0	0.0
<i>On-site Releases (tonnes):</i>				
Air	7 876.844	7 324.168	-552.676	-7.0
Water	170.321	271.023	100.702	59.1
Land	5 144.088	6 348.853	1 204.765	23.4
Injection	1 926.655	1 866.073	-60.582	-3.1
Total On-site Releases	15 155.622	15 844.466	688.844	4.5
<i>Off-site Transfers for Treatment (tonnes):</i>				
Physical	757.120	611.778	-145.342	-19.2
Chemical	620.896	625.904	5.008	0.8
Biological	64.530	67.236	2.706	4.2
Incineration	684.185	646.260	-37.925	-5.5
MSTP	43.954	34.675	-9.279	-21.1
Total Off-site Treatment	2 170.685	1 985.853	-184.832	-8.5
<i>Off-site Transfers for Disposal (tonnes):</i>				
Landfill	8 822.799	8 545.010	-277.789	-3.1
Storage	162.536	289.263	126.727	77.9
Underground Injection	252.700	272.141	19.441	7.7
Land Treatment	51.664	1.312	-50.352	-97.5
Total Off-site Final Disposal	9 289.699	9 107.726	-181.973	-2.0
Total Off-site Transfers	11 460.384	11 093.579	-366.805	-3.2
<i>Off-site Transfers for Recycling (tonnes)*:</i>				
Recycling		72 971.892		
Energy Recovery		770.199		
Total Recycling		73 742.091		

* Reporting of transfers for recycling was voluntary for 1997 and mandatory for 1998. As a result, no year-to-year comparison was made.

Table 12 provides an overview of the 24 NPRI-listed, CEPA-toxic and carcinogenic pollutants reported to the NPRI in 1997 and 1998, and also presents the breakdown of releases of these 24 pollutants by environmental medium. No facilities submitted reports for diethyl sulphate in 1997 or 1998.

TABLE 12
ON-SITE RELEASES OF NPRI-LISTED, CEPA-TOXIC AND CARCINOGENIC POLLUTANTS (1997-1998) AND ON-SITE RELEASES BY ENVIRONMENTAL MEDIUM IN 1998 (TONNES)

Pollutant	1998					1997	1997-1998	
	Underground						Total	% Change
	Air	Injection	Water	Land	Total			
Acrylamide	0.230	0.000	0.000	0.000	0.530	0.627	- 0.097	- 15.5
Arsenic (and its compounds)	172.981	1 719.839	4.464	183.579	2 081.749	2 114.699	- 32.950	- 1.6
Asbestos (friable form)	0.000	0.000	0.000	3 021.630	3 022.159	3 067.678	- 45.519	- 1.5
Benzene	1 475.536	103.155	1.650	0.523	1 585.782	1 773.153	- 187.371	- 10.6
Benzyl chloride	0.008	0.000	0.000	0.000	0.138	0.140	- 0.002	- 1.4
Bis(2-ethylhexyl) phthalate	8.383	0.000	0.000	0.136	8.593	19.920	- 11.327	- 56.9
1,3-Butadiene	105.785	0.000	0.000	0.000	106.032	111.705	- 5.673	- 5.1
Carbon tetrachloride	0.464	0.000	0.000	0.000	0.464	0.337	0.127	37.7
Chromium (and its compounds)	51.548	2.403	21.771	1 876.456	1 959.896	955.892	1 004.004	105.0
1,2-Dichloroethane	25.846	0.000	0.162	0.352	26.360	19.703	6.657	33.8
Dimethyl sulphate	0.013	0.000	0.000	0.000	0.013	0.010	0.003	30.0
Epichlorohydrin	0.000	0.000	0.000	0.000	0.003	0.004	- 0.001	- 25.0
Ethylene oxide	18.517	0.325	0.000	0.000	19.799	18.449	1.350	7.3
Formaldehyde	1 237.252	40.300	167.599	0.000	1 448.108	1 424.486	23.622	1.7
Lead (and its compounds)	544.295	0.040	17.551	1 060.938	1 628.024	1 531.001	97.023	6.3
Mercury (and its compounds)	0.937	0.000	0.063	0.000	1.017	2.527	- 1.510	- 59.8
p,p'-Methylenebis(2-chloroaniline)	0.000	0.000	0.000	0.000	0.005	0.006	- 0.001	- 16.7
Nickel (and its compounds)	433.283	0.011	56.476	202.568	696.740	654.700	42.040	6.4
Styrene oxide	0.000	0.000	0.000	0.000	0.343	0.469	- 0.126	- 26.9
Tetrachloroethylene	125.443	0.000	0.038	0.000	126.106	149.061	- 22.955	- 15.4
Trichloroethylene	843.162	0.000	0.000	0.000	844.492	772.571	71.921	9.3
Vinyl chloride	25.463	0.000	0.079	0.000	26.001	43.997	- 17.996	- 40.9
	7 324.168	1 866.073	271.023	6 348.853	15 844.466	15 155.622	688.844	4.5

TABLE 11
NATIONAL SUMMARY OF NPRI-LISTED, CEPA-TOXIC AND
CARCINOGENIC POLLUTANT INFORMATION (1997-1998)

	1997	1998	Change (1997-1998)	% Change (1997-1998)
Total Facilities	778	786	8	1.0
Total Reports	1 277	1 275	-2	-0.2
Pollutants Reported	24	24	0	0.0
<i>On-site Releases (tonnes):</i>				
Air	7 876.844	7 324.168	-552.676	-7.0
Water	170.321	271.023	100.702	59.1
Land	5 144.088	6 348.853	1 204.765	23.4
Injection	1 926.655	1 866.073	-60.582	-3.1
Total On-site Releases	15 155.622	15 844.466	688.844	4.5
<i>Off-site Transfers for Treatment (tonnes):</i>				
Physical	757.120	611.778	-145.342	-19.2
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* Reporting of transfers for recycling was voluntary for 1997 and mandatory for 1998. As a result, no year-to-year comparison was made.

Table 12 provides an overview of the 24 NPRI-listed, CEPA-toxic and carcinogenic pollutants reported to the NPRI in 1997 and 1998, and also presents the breakdown of releases of these 24 pollutants by environmental medium. No facilities submitted reports for diethyl sulphate in 1997 or 1998.

TABLE 12
ON-SITE RELEASES OF NPRI-LISTED, CEPA-TOXIC AND CARCINOGENIC POLLUTANTS (1997-1998) AND ON-SITE RELEASES BY ENVIRONMENTAL MEDIUM IN 1998 (TONNES)

Pollutant	1998				1997	1997-1998	
	Air	Underground Injection	Water	Land	Total	Change	% Change
Acrylamide	0.230	0.000	0.000	0.000	0.530	-0.097	-15.5
Arsenic (and its compounds)	172.981	1 719.839	4.464	183.579	2 081.749	-32.950	-1.6
Asbestos (friable form)	0.000	0.000	0.000	3 021.630	3 022.159	-45.519	-1.5
Benzene	1 475.536	103.155	1.650	0.523	1 585.782	-187.371	-10.6
Benzyl chloride	0.008	0.000	0.000	0.138	0.140	-0.002	-1.4
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Carbon tetrachloride	0.464	0.000	0.000	0.000	0.464	0.127	37.7
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Dimethyl sulphate	0.013	0.000	0.000	0.000	0.013	0.003	30.0
Epichlorohydrin	0.000	0.000	0.000	0.000	0.003	-0.001	-25.0
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Mercury (and its compounds)	0.937	0.000	0.063	0.000	1.017	-1.510	-59.8
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Vinyl chloride	25.463	0.000	0.079	0.000	26.001	-17.996	-40.9
	7 324.168	1 866.073	271.023	6 348.853	15 844.466	588.844	4.5

Figure 9 illustrates quantities of NPRI-listed, CEPA-toxic and carcinogenic pollutants released to air, underground injection, water and land, and total releases in 1997 and 1998.

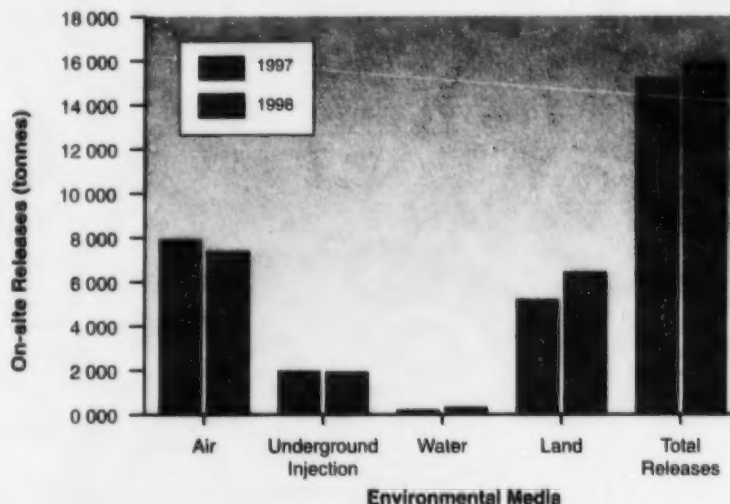


Figure 9
Summary of National On-site Releases of NPRI-listed, CEPA-toxic and Carcinogenic Pollutants by Environmental Media (1997-1998)

2.5.2 On-site Releases of NPRI-listed, CEPA-toxic and Carcinogenic Pollutants by Industrial Sector in 1998

Pollutants that are CEPA-toxic, carcinogenic or suspected of being carcinogenic are sometimes associated with only one or two easily-identifiable industrial sectors. Figure 10 illustrates the largest on-site releases of NPRI-listed, CEPA-toxic and carcinogenic pollutants by industrial sector in 1998. More than 80% of on-site releases were reported by five sectors.

The following listing compares 1997 and 1998 releases reported by five major industrial sectors:

- SIC 29 – Primary Metal Industries:
 - total releases in 1997: 3 562 tonnes (56 facilities)
 - total releases in 1998: 4 407 tonnes (60 facilities)
 - an increase of 845 tonnes (+23.7%) from 1997
- SIC 99 – Other Service Industries:
 - total releases in 1997: 3 143 tonnes (5 facilities)
 - total releases in 1998: 2 977 tonnes (7 facilities)
 - a decrease of 166 tonnes (–5.3%) from 1997

- SIC 06 – Mining Industries:
 - total releases in 1997: 2 059 tonnes (29 facilities)
 - total releases in 1998: 2 070 tonnes (29 facilities)
 - an increase of 11 tonnes (+0.5%) from 1997
- SIC 16 – Plastic Products Industries:
 - total releases in 1997: 1 577 tonnes (23 facilities)
 - total releases in 1998: 1 548 tonnes (23 facilities)
 - a decrease of 29 tonnes (–0.9%) from 1997
- SIC 37 – Chemical and Chemical Products Industries:
 - total releases in 1997: 1 302 tonnes (104 facilities)
 - total releases in 1998: 1 246 tonnes (108 facilities)
 - a decrease of 56 tonnes (–4.3%) from 1997

As noted in section 2.5.1, one facility (Inco Limited, NPRI #0444) in the Primary Metals Industries increased its releases of chromium and its compounds by 896 tonnes in 1998. The Other Service Industries classification includes waste handling and treatment facilities, which accounts for its relatively high releases of these pollutants.

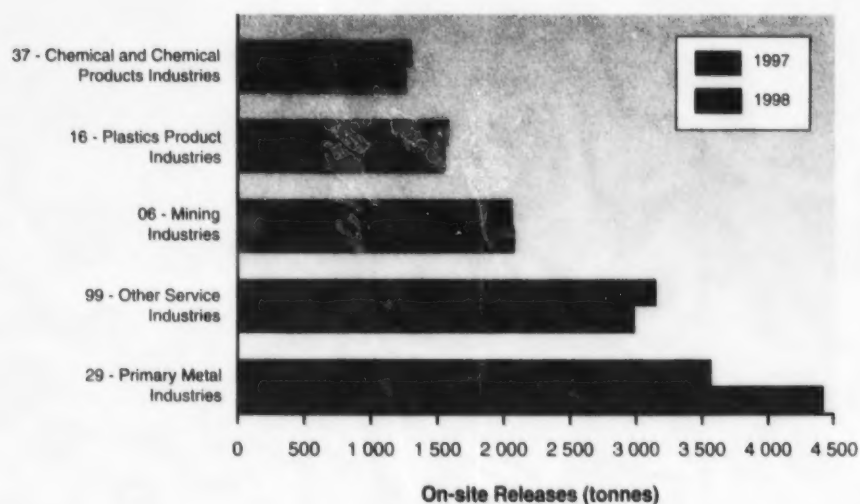


Figure 10
Industrial Sectors Reporting the Largest On-site Releases of NPRI-listed, CEPA-toxic and Carcinogenic Pollutants in 1997 and 1998

2.5.3 Off-site Transfers for Disposal of NPRI-listed, CEPA-toxic and Carcinogenic Pollutants in 1998

In 1998, off-site transfers for disposal of all NPRI pollutants totalled 88 489 tonnes; off-site transfers of NPRI-listed, CEPA-toxic and carcinogenic pollutants totalled 11 094 tonnes (12.5%). Table 11 shows that transfers off site for treatment prior

to final disposal contributed 1 986 tonnes (17.9% of total transfers for disposal of NPRI-listed, CEPA-toxic and carcinogenic pollutants) and off-site transfers for final disposal contributed 9 108 tonnes (82.1% of total transfers for disposal of NPRI-listed, CEPA-toxic and carcinogenic pollutants) in 1998.

Figures 11 and 12 provide an overview of transfers off site of NPRI-listed, CEPA-toxic and carcinogenic pollutants by treatment or disposal category for 1998.

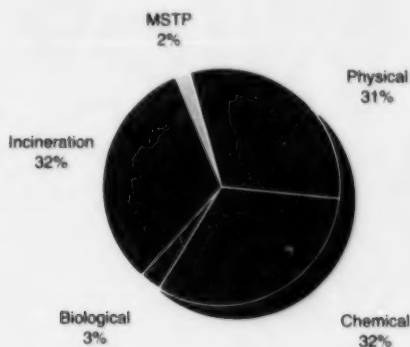


Figure 11
Off-site Transfers of NPRI-listed, CEPA-toxic and Carcinogenic Pollutants for Treatment Prior to Final Disposal in 1998

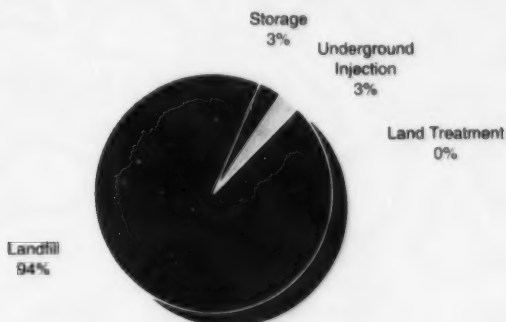


Figure 12
Off-site Transfers of NPRI-listed, CEPA-toxic and Carcinogenic Pollutants for Final Disposal in 1998

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Table 11 shows that NPRI-listed, CEPA-toxic and carcinogenic pollutants were transferred off site in 1998 for:

- treatment prior to final disposal: 1 986 tonnes (a decrease of 185 tonnes (-8.5%) since 1997)
- final disposal: 9 108 tonnes (a decrease of 182 tonnes (-2.0%) since 1997)

Overall, off-site transfers of NPRI-listed, CEPA-toxic and carcinogenic pollutants decreased by 367 tonnes (-3.2%) from 1997 to 1998.

Table 13 provides an overview of 19 NPRI-listed, CEPA-toxic and carcinogenic pollutants that were transferred off site from 1997 to 1998. The remaining five pollutants were not included in Table 13; there were no reported transfers off site in 1998.

TABLE 13
OFF-SITE TRANSFERS FOR DISPOSAL OF NPRI-LISTED, CEPA-TOXIC
AND CARCINOGENIC POLLUTANTS (1997-1998) (TONNES)

Pollutant	1997	1998	Change (1997-1998)	% Change (1997-1998)
Acrylamide	2.684	0.040	-2.644	-98.5
Arsenic (and its compounds)	150.665	205.912	55.247	36.7
Asbestos (friable form)	1 653.112	2 247.531	594.419	36.0
Benzene	219.488	197.912	-21.576	-9.8
Bis(2-ethylhexyl) phthalate	45.800	53.894	8.094	17.7
1,3-Butadiene	12.621	4.443	-8.178	-64.8
Cadmium (and its compounds)	183.063	192.172	9.109	5.0
Carbon tetrachloride	28.445	22.040	-6.405	-22.5
Chromium (and its compounds)	3 366.938	3 058.670	-308.268	-9.2
1,2-Dichloroethane	2.009	0.778	-1.231	-61.3
Dichloromethane	295.079	237.659	-57.420	-19.5
Epichlorohydrin	0.003	0.025	0.022	*
Formaldehyde	329.752	448.922	119.170	36.1
Lead (and its compounds)	4 108.796	3 327.183	-781.613	-19.0
Mercury (and its compounds)	123.240	318.942	195.702	158.8
Nickel (and its compounds)	812.350	638.374	-173.976	-21.4
Tetrachloroethylene	53.153	52.617	-0.536	-1.0
Trichloroethylene	73.185	86.296	13.111	17.9
Vinyl chloride	0.001	0.169	0.168	*
Total	11 460.384	11 093.579	-366.805	-3.2

* Changes greater than 500% are not shown.

2.5.4 Off-site Transfers for Disposal of NPRI-listed, CEPA-toxic and Carcinogenic Pollutants by Industrial Sector in 1998

Figure 13 illustrates the largest off-site transfers for disposal of NPRI-listed, CEPA-toxic and carcinogenic pollutants by industrial sector for 1998. These five sectors represent about 80% of total off-site transfers for disposal of these pollutants.

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Figure 13 illustrates the largest off-site transfers for disposal of NPRI-listed, CEPA-toxic and carcinogenic pollutants by industrial sector for 1998. These five sectors represent about 80% of total off-site transfers for disposal of these pollutants.

The following listing compares all 1997 and 1998 off-site transfers for disposal reported by these five industrial sectors:

- SIC 29 – Primary Metal Industries:
 - total off-site transfers for 1997: 4 318 tonnes (37 facilities)
 - total off-site transfers for 1998: 3 740 tonnes (42 facilities)
 - a decrease of 578 tonnes (–13.4%) from 1997
- SIC 77 – Business Service Industries:
 - total off-site transfers in 1997: 1 933 tonnes (6 facilities)
 - total off-site transfers in 1998: 1 782 tonnes (6 facilities)
 - a decrease of 151 tonnes (–7.8%) from 1997
- SIC 49 – Other Utility Industries:
 - total off-site transfers in 1997: 1 479 tonnes (8 facilities)
 - total off-site transfers in 1998: 1 490 tonnes (9 facilities)
 - an increase of 11 tonnes (+0.7%) from 1997
- SIC 37 – Chemical and Chemical Products Industries:
 - total off-site transfers in 1997: 1 167 tonnes (75 facilities)
 - total off-site transfers in 1998: 1 061 tonnes (87 facilities)
 - a decrease of 106 tonnes (–5.5%) from 1997
- SIC 36 – Refined Petroleum and Coal Products Industries:
 - total off-site transfers in 1997: 535 tonnes (16 facilities)
 - total off-site transfers in 1998: 755 tonnes (16 facilities)
 - an increase of 220 tonnes (+41.1%) from 1997

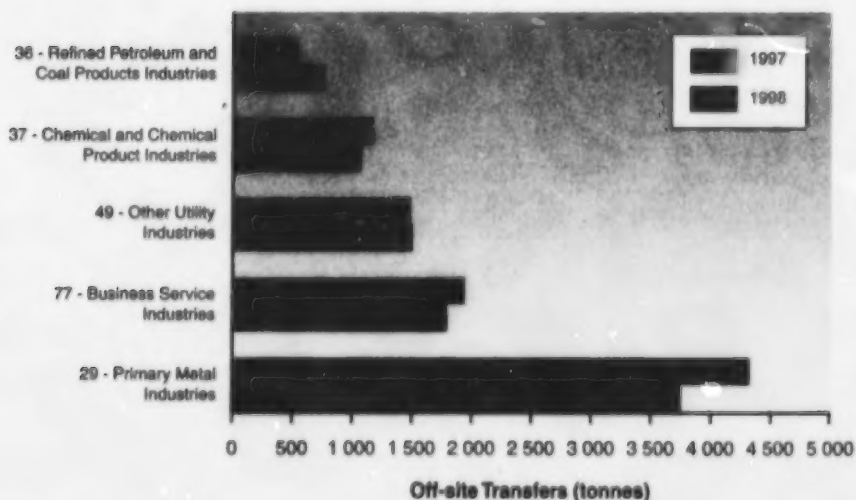


Figure 13
Industrial Sectors Reporting the Largest Off-site Transfers for Disposal of NPRI-listed, CEPA-toxic and Carcinogenic Pollutants in 1997 and 1998

3. Pollution Prevention in 1998

3.1 Reporting Requirements

Facilities that have taken measures to prevent the generation of NPRI pollutants and wastes were asked to indicate, from the list of pollution-prevention (P2) techniques and practices provided, what type of P2 activities they have implemented, on a substance-by-substance basis. Facilities were required to provide qualitative data only, but were encouraged to provide further details on the nature of their P2 activities if they so desired (including environmental and economic benefits).

Facilities were required to report on their P2 activities for NPRI-listed substances only. However, they were also encouraged to separately provide information on other P2 initiatives (e.g., P2 activities for non-NPRI substances, water and energy conservation initiatives, etc.).

Qualitative reporting provides limited basic information on P2 activity in Canada. Qualitative data, such as the information that was provided by facilities for the 1998 reporting year, indicate if P2 activity has occurred in reporting facilities, but do not indicate the extent (frequency, comprehensiveness) of these activities or their effect on the generation of pollutants and wastes.

3.2 Pollution-Prevention Activities Reported in 1998

This section of the National Overview presents the information reported by facilities on pollution prevention. It shows the P2 techniques and practices that are most commonly reported and pollution-prevention activity by industrial sector.

Based on the information reported by facilities, a large percentage (80.1%) of reporting facilities across Canada conducted P2 activities for many NPRI-listed substances, with good operating practices or training being the most frequently reported approach used (30.5%) (see Figure 14). Only a small percentage of facilities reported pollution prevention as a reason for changes in quantities of on-site releases and off-site transfers from the previous year (average 8.8% and 6.3% respectively).

Table 14 shows that participation in P2 activities varies across industry sectors. Some sectors reported limited P2 activity, while for others, all facilities reported some involvement in pollution prevention.

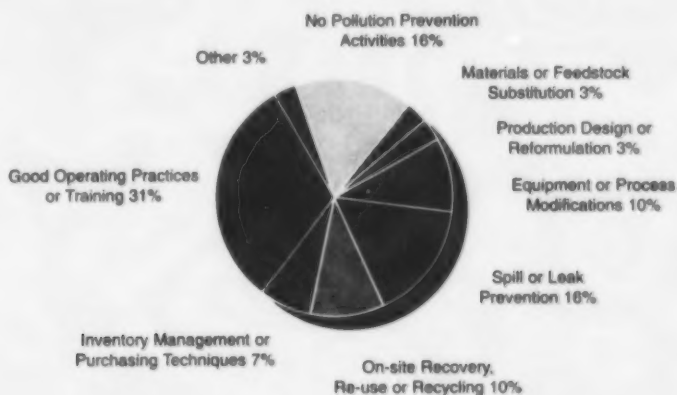


Figure 14
Relative Distribution of Pollution Prevention
Activities Reported in Canada (1998)

A total of 428 facilities (or 21.3%) provided some further details about their P2 initiatives in the form of comments. These comments help in further understanding the nature of P2 activities implemented; some examples follow.

- NHB Industries Ltd. (Crawford Facility) Peterborough, ON (NPRI #5631) reported that "In the last few months of 1998, we started to recycle our waste thinner. Our company has purchased two recycling units and is currently recycling in-house. Our recycling capacity is 20 litres per day. It is expected that in 1999, our purchases of thinner will be 31,200 litres less than in 1998. NHB is continuing its investigation into the possibility of increasing its recycling capacity in order to reduce the amount of thinner purchased by our facility."
- Nalco Canada Inc. (Burlington Site) Burlington, ON (NPRI #1668) reported that "A process has been implemented to collect the residual polymer that comes back in the returnable totes from the customer. The polymer is vacuumed from the totes. This greatly minimizes the amount of polymer remaining in the totes when it goes to the tote cleaning station. The collected polymer is then mixed and added to the production batch. This process greatly minimizes the amount of polymer that entered the effluent system, and in addition minimizes the amount of polymer sent out as non hazardous waste."
- Pine Falls Paper Company Limited, Pine Falls, MB (NPRI #0004) reported that "Pine Falls Paper Company is working toward a reduction in water consumption. This will lead to a reduction in substances being emitted to surface water. In addition, conversion of the existing pulping process to thermal mechanical pulping in the next two years will lead to a substantial reduction in air emissions."
- Simplot Canada Limited, Brandon, MB (NPRI #2515) reported that "Simplot has just completed an upgrade to production which has doubled our level of production. This past year was a startup and troubleshooting year but now we are running very well. The upgrade allowed us to decrease our water usage and hydrochloric acid usage. We have reduced our nitrate releases through process changes as well as ammonia releases per tonne of production."

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TABLE 14
PERCENTAGE OF FACILITIES REPORTING SOME P2 ACTIVITY IN
1998, BY INDUSTRIAL SECTOR (WHERE MORE THAN 10 REPORTS
SUBMITTED)

SIC Code	Industrial Sector (number of reports submitted)	% of Facilities Reporting some P2 Activity
02	Service Ind. Incidental to Agriculture (14 reports)	100.0
17	Leather and Allied Products Industries (11 reports)	100.0
59	Other Products and Industries, Wholesale (57 reports)	98.5
45	Transportation Industries (53 reports)	98.0
51	Petroleum Products Industries, Wholesale (47 reports)	96.6
18	Primary Textile Industries (16 reports)	96.2
41	Industrial and Heavy (Engineering) Construction Industries (71 reports)	94.6
56	Metals, Hardware, Plumbing, Heating, and Building Materials Industries, Wholesale (16 reports)	93.7
25	Wood Industries (209 reports)	93.5
16	Plastic Products Industries (253 reports)	91.6
10	Food Industries (160 reports)	90.4
33	Electrical and Electronic Products Ind. (157 reports)	89.4
28	Printing, Publishing, and Allied Ind. (51 reports)	89.1
31	Machinery Industries (Except Electrical Machinery) (30 reports)	89.1
29	Primary Metal Industries (637 reports)	87.7
32	Transportation Equipment Industries (600 reports)	86.6
11	Beverage Industries (43 reports)	85.7
30	Fabricated Metal Products Ind. (Except Machinery and Trans. Equipment Ind.) (466 reports)	84.4
06	Mining Industries (256 reports)	84.2
15	Rubber Products Industries (86 reports)	83.6
35	Non-metallic Mineral Products Industries (117 reports)	83.6
55	Motor Vehicle, Parts and Accessories Industries, Wholesale (55 reports)	83.6
37	Chemical and Chemical Products Ind. (1850 reports)	83.6
07	Crude Petroleum and Natural Gas Ind. (575 reports)	83.0
39	Other Manufacturing Industries (136 reports)	81.1
26	Furniture and Fixture Industries (77 reports)	80.6
36	Refined Petroleum and Coal Products Ind. (424 reports)	73.4
27	Paper and Allied Products Industries (457 reports)	72.2
99	Other Service Industries (122 reports)	70.9
19	Textile Products Industries (15 reports)	68.4
49	Other Utility Industries (281 reports)	67.4
83	Local Government Service Industries (14 reports)	65.0
77	Business Service Industries (77 reports)	16.7

- Ontario Power Generation Inc. (Darlington Nuclear Generating Station) Bowmanville, ON (NPRI #3163) reported that "Darlington Nuclear is implementing an ongoing program to reduce hydrazine emissions. Results are being obtained through better statistical control of process control data and through better maintenance of associated analytical equipment. These actions allow a more narrow band of control, closer to the concentration limit. Other technologies are currently being studied to reduce emissions further in coming years."

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45	Transportation Industries (53 reports)	98.0
51	Petroleum Products Industries, Wholesale (47 reports)	96.6
18	Primary Textile Industries (16 reports)	96.2
41	Industrial and Heavy (Engineering) Construction Industries (71 reports)	94.6
56	Metals, Hardware, Plumbing, Heating, and Building Materials Industries, Wholesale (16 reports)	93.7
25	Wood Industries (209 reports)	93.5
16	Plastic Products Industries (253 reports)	91.6
10	Food Industries (160 reports)	90.4
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- Lakeside Feeders Ltd. (Lakeside Packers) Brooks, AB (NPRI #5232) reported that "Treated effluent from slaughter/processing activities are used as nutrients and irrigation waters for farming activities (reduced water consumption and need for chemical fertilizers). A lighting efficiency program was implemented to reduce electrical consumption. Dissolved air flotation is used to recover animal fat/grease from effluent streams (in order to recapture lost product and facilitate water treatment). Chill effluent waters are directed through hide plant raceways prior to discharge to treatment (in order to reduce water demands)."
- Glendale International Corporation (Graphico Precision) Scarborough, ON (NPRI #5750) reported that "We have almost eliminated all chelating agents by selective purchase of chemicals over the past 10 years. This has improved our sight batch waste treatment efficiency in reducing metals to drain. New copper etching process machinery has been purchased with counterflow flood rinses to hold copper containing process solutions back in the process chamber to form a 99.9% closed loop. We have changed our plating racks to copper PVC-protected tips from the old, open stainless steel type. This eliminates the use of nitric acid to clean the tips of plated-up material."
- NOVA Chemicals Ltd. (St. Clair River Site) Corunna, ON (NPRI #4700) reported that "A new \$13 million device, called the "A-Line Stripper", was installed and operated for part of 1998. This new stripper is the first of its kind in the world, and is part of the process in manufacturing polyethylene. This device captures cyclohexane (which was previously emitted to the atmosphere) and the cyclohexane is reused in the process. About 850 000 kg was not emitted to the air as a result of this new stripper. As we continue to learn how to operate this new device, we expect even more reductions in the amount of air emissions."
- Husky Injection Molding Systems Ltd. (Bolton Campus) Bolton, ON (NPRI #5756) reported that "In the last two years, Husky has eliminated the annual use of 246 025 litres of chlorinated solvents (trichloroethane) by converting metal parts cleaners to water-based washers; stopped using more than 4 000 litres of both toluene and naphtha annually, through responsible product substitution; eliminated the annual release of 8.4 tonnes of VOCs by converting our painting process to water-based coatings; and converted 60 000 m² of grass to a naturalized landscape, eliminating the need for 4.5 tonnes of chemical fertilizer and 300 kg of herbicides annually."
- Nortel Networks (Carrier Solutions) Belleville, ON (NPRI #1766) reported that "An R&D program was started over 7 years ago, to first of all eliminate freon as a cleaner in the wavesolder process and then to eliminate alcohol-based flux (VOC-type), has been successfully concluded. The final initiative involved the changeover to a water-based flux (VOC-free). Water-based fluxes only include 3% carboxylic acid as an active agent. This was done while maintaining quality of product produced."

These comments are good examples of pollution prevention at work. However, in a number of other cases, there still appears to be a misunderstanding of what is meant by pollution prevention, as the activities described related to pollution control or waste-management activities.

4. Comparison to Other Release Sources

4.1 Overview of Other Release Sources

The NPRI currently collects pollutant release and transfer information from a broad range of industrial and non-industrial sectors, including chemical distribution systems, government services facilities, industrial sectors, processing plants, and recovery and recycling operations. There are many other release sources which are not currently captured under the NPRI.

The intent of this section is to provide context for the NPRI information presented in this National Overview. Other sources of environmental data may include information collected by other programs within Environment Canada, as well as other estimated release sources.

This section provides pollutant-release information from fuel distribution and mobile sources, other emission inventories and initiatives such as criteria air contaminants and greenhouse gases, and the Accelerated Reduction/Elimination of Toxics (ARET) initiative.

4.2 Fuel Distribution and Mobile Sources

Environment Canada estimates total releases of NPRI pollutants from fuel-distribution centres, motor vehicles and mobile equipment sources. The mobile sources include aircraft, marine, off-road use of gasoline-powered engines, on-road motor vehicles, lawnmowers, railways, etc.

Estimates for 1997 were derived using methodology described in Appendix 12 of the *National Pollutant Release Inventory – Summary Report 1994*, updated with data from the 1995 *Common Air Contaminants Inventory* (January 1999 version). These data were presented in Appendix 3 of the *National Pollutant Release Inventory – Summary Report 1997*, and so will not be repeated here.

4.3 Greenhouse Gases

The national inventory of greenhouse gases (GHG) was compiled to meet Canada's commitment to the United Nations' Framework Convention on Climate Change. Releases of greenhouse gases, in particular carbon dioxide, were estimated based on energy-use information provided by Statistics Canada. The Statistics Canada data were supplemented by additional information provided by the provinces, territories, industrial associations and individual companies. In addition, Environment Canada conducted field studies and gathered measurements for selected sources. GHG include:

- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous oxide (N₂O)
- Perfluorocarbons (PFCs): carbon tetrachloride (CF₄), carbon hexafluoride (C₂F₆)
- Hydrofluorocarbons (HFCs): HFC-23, HFC-32, HFC-125, HFC-134a, HFC-143a, HFC-152a, HFC-227ea
- Sulphur hexafluoride (SF₆)

The most recent version of this inventory (1997) is presented in Table 15. More information regarding the GHG program and inventory can be accessed through Environment Canada's Web site at <www.ec.gc.ca/pdb/>

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TABLE 15
GREENHOUSE GAS EMISSIONS IN CANADA IN 1997 (KILOTONNES)

Sector	Carbon Dioxide*	Methane**	Nitrous Oxide**	HFCs, PFCs & SF ₆ **
Energy				
Energy Industries ¹	175 000	39 000	1 000	
Transportation ²	174 000	520	9 100	
Residential, Commercial & Institutional	74 300	5 400	1 100	
Manufacturing & Construction	53 900	32	470	
Agriculture & Forestry	2 920	1.1	17	
Industrial Processes				
Cement, Lime Production; Soda Ash, Limestone Use	8 280			
Ammonia Production	4 140			
Iron & Steel Production	8 110			
Aluminum Production	3 790			6 000
Undifferentiated Production ³	14 000			
Nitric and Adipic Acid Production		11 000		
Magnesium Production			1 400	
Solvents			460	500
Agriculture				
Soils	1 000		30 000	
Enteric Fermentation	18 000			
Manure Management	4 200	4 600		
Waste				
Landfills		21 000		
Wastewater Handling	390	950		
Incineration	280	6.9	58	
Land Use, Land Use Change & Forestry				
	900			
Prescribed Burns		900		
Carbon Cycle ⁴ [net removal]	[-20 000]			
Total	520 000	90 000	64 000	7 800

1 Energy Industries include: coal, oil & gas production, refining & transmission; electricity & steam production

2 Transportation includes: air, road, rail, marine, off-road & pipeline transport

3 Undifferentiated Production: non-energy use of fossil fuel products such as lubricants, asphalt and chemicals

4 Carbon dioxide from Land Use Change and Forestry is not included in totals.

* kilotonnes of CO₂

** kilotonnes of CO₂ equivalent

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Land Use, Land Use Change & Forestry	900			
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3 Undifferentiated Production: non-energy use of fossil fuel products such as lubricants, asphalt and chemicals

4 Carbon dioxide from Land Use Change and Forestry is not included in totals.

* kilotonnes of CO₂

** kilotonnes of CO₂ equivalent

4.4 Criteria Air Contaminants

Environment Canada and the provincial and territorial Ministers of the Environment have updated the national emissions inventory of Criteria Air Contaminants (CAC). This inventory estimates emissions from more than 60 industrial and non-industrial activities for the following contaminants:

- Sulphur oxides (SO_x)
- Nitrogen oxides (NO_x)
- Volatile organic compounds (VOCs)
- Total suspended particulates (TSP)
- Carbon monoxide (CO)
- Fine particulates (PM₁₀ and PM_{2.5})

The CAC inventory supports a number of national and international programs including the Ambient Air Quality Criteria, the Convention on Long-Range Transboundary Air Pollution, the NO_x/VOC Management Plan and the Canada-U.S. Air Quality Agreement.

A summary of the 1995 CAC emissions inventory for point sources, area sources, natural sources, and biogenic sources in Canada was provided in Appendix 4 of *National Pollutant Release Inventory – Summary Report 1997*, and will not be reported here. Improved calculation methods were used in the 1995 emissions inventory; only the sulphur oxides emissions can be compared to earlier versions. More information and further updates are available through Environment Canada's Web site at <www.ec.gc.ca/pdb/>.

4.5 Accelerated Reduction/Elimination of Toxics (ARET)

The ARET program is a voluntary, multi-stakeholder initiative, co-managed by the federal government and industry, in participation with 316 facilities from 169 companies. This program's latest annual report, *Environmental Leaders 3*, was released in April 1999. An update will be published in 2000. The report provides details on emission reductions, achieved through voluntary measures, of 117 toxic chemicals including chlorine dioxide, zinc, polycyclic aromatic hydrocarbons (PAHs), benzene, formaldehyde, lead and copper. Results are shown by substance, facility, company and sector.

The latest data, for the 1998 reporting year, show that participating organizations, from nine key industrial sectors and four federal departments, have reduced emissions of substances included in the ARET program by 26 360 tonnes (-67%) from base-year levels. Since 1997, reported emissions have decreased by 1 469 tonnes (-10%). Nearly one-half of the participating facilities have already met short-term targets for all substance categories for which they report. Year 2000 targets have been met or exceeded for 62% of ARET substances being reported.

Environmental Leaders 3 and its update are available from Environment Canada's Inquiry Center at 1-800-668-6767 or through Environment Canada's Web site at <www.ec.gc.ca/aret/reports>.

5. Supplementary Tables and Analyses

Readers should refer to the companion document *About the National Pollutant Release Inventory* for a description of the program as well as contextual and background information for this report. It can be obtained from the NPRI offices listed on the inside front cover, or on Environment Canada's NPRI Web site at <www.ec.gc.ca/pdb/npri>.

Supplementary Tables that complement this National Overview are also available on the NPRI Web site. They include:

Supplementary Table 1: List of Facilities Reporting to the NPRI in 1998

This table provides a complete, alphabetical listing of all Canadian facilities that reported to the NPRI in 1998. Included are the facilities' NPRI identification number, two-digit Standard Industrial Classification (SIC) code, company name, facility name and location.

Supplementary Table 2: On-site Releases in Canada in 1998

This table provides a summary of reported on-site releases of pollutants. For each pollutant, total releases to air, water, land and underground injection are presented. The listing is sorted alphabetically, by pollutant.

Supplementary Table 3: Off-site Transfers for Disposal in Canada in 1998

This table provides an analysis of the total quantity of pollutants transferred off site for disposal in 1998. The total quantities for each category of disposal (final disposal or treatment prior to final disposal) are highlighted. The listing is sorted alphabetically, by pollutant.

Supplementary Table 4: Off-site Transfers for Recycling in Canada in 1998

This table provides information of the off-site transfers of substances for recycling. The listing is sorted alphabetically, by pollutant.

Supplementary Table 5: Unreported NPRI Pollutants in 1998

This table provides information on the pollutants for which no reports were submitted in 1997 and 1998.

This National Overview is focused on the national picture and on changes from 1997 to 1998. Reports and fact sheets to be released later in 2000 will provide more in-depth trend analysis and overviews of pollutant releases and transfers by province, territory or region. Supplementary tables will complement these additional reports and analyses. All reports and tables will be available electronically on the NPRI Web site as they are published.

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Additional References

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Fax: (301) 480-3537

Web site: www.nlm.nih.gov/hinfo.html

Appendix 1 - Alphabetical Listings of the 1998 NPRI Substances

NAME	CAS No.	NAME	CAS No.
Acetaldehyde	75-07-0	Chloromethane	74-87-3
Acetone	67-64-1	Chromium ⁵	*
Acetonitrile	75-05-8	Cobalt ⁵	*
Acrylamide	79-06-1	Copper ⁵	*
Acrylic acid ¹	79-10-7	Cresol ^{1,7}	1319-77-3
Acrylonitrile	107-13-1	<i>m</i> -Cresol ¹	108-39-4
Allyl alcohol	107-18-6	<i>o</i> -Cresol ¹	95-48-7
Allyl chloride	107-05-1	<i>p</i> -Cresol ¹	106-44-5
Aluminum ²	7429-90-5	Cumene	98-82-8
Aluminum oxide ³	1344-28-1	Cumene hydroperoxide	80-15-9
Ammonia - total ⁴	*	Cyanides ⁸	*
Aniline ¹	62-53-3	Cyclohexane	110-82-7
Anthracene	120-12-7	Decabromodiphenyl oxide	1163-19-5
Antimony ⁵	*	2,4-Diaminotoluene ¹	95-80-7
Arsenic ⁵	*	Dibutyl phthalate	84-74-2
Asbestos ⁶	1332-21-4	<i>o</i> -Dichlorobenzene	95-50-1
Benzene	71-43-2	<i>p</i> -Dichlorobenzene	106-46-7
Benzoyl chloride	98-88-4	1,2-Dichloroethane	107-06-2
Benzoyl peroxide	94-36-0	Dichloromethane	75-09-2
Benzyl chloride	100-44-7	2,4-Dichlorophenol ¹	120-83-2
Biphenyl	92-52-4	1,2-Dichloropropane	78-87-5
<i>Bis</i> (2-ethylhexyl) adipate	103-23-1	Diethanolamine ¹	111-42-2
<i>Bis</i> (2-ethylhexyl) phthalate	117-81-7	Diethyl phthalate	84-66-2
Bromomethane	74-83-9	Diethyl sulphate	64-67-5
1,3-Butadiene	106-99-0	<i>N,N</i> -Dimethylaniline ¹	121-69-7
Butyl acrylate	141-32-2	Dimethyl phthalate	131-11-3
<i>i</i> -Butyl alcohol	78-83-1	Dimethyl sulphate	77-78-1
<i>n</i> -Butyl alcohol	71-36-3	4,6-Dinitro- <i>o</i> -cresol ¹	534-52-1
<i>sec</i> -Butyl alcohol	78-92-2	2,4-Dinitrotoluene	121-14-2
<i>tert</i> -Butyl alcohol	75-65-0	2,6-Dinitrotoluene	606-20-2
Butyl benzyl phthalate	85-68-7	Dinitrotoluene ⁷	25321-14-6
1,2-Butylene oxide	106-88-7	Di- <i>n</i> -octyl phthalate	117-84-0
Butyraldehyde	123-72-8	1,4-Dioxane	123-91-1
C.I. Acid Green 3	4680-78-8	Epichlorohydrin	106-89-8
C.I. Basic Green 4	569-64-2	2-Ethoxyethanol	110-80-5
C.I. Basic Red 1	989-38-8	2-Ethoxyethyl acetate	111-15-9
C.I. Disperse Yellow 3	2832-40-8	Ethyl acrylate	140-88-5
C.I. Food Red 15	81-88-9	Ethylbenzene	100-41-4
C.I. Solvent Orange 7	3118-97-6	Ethyl chloroformate	541-41-3
C.I. Solvent Yellow 14	842-07-9	Ethylene	74-85-1
Cadmium ⁵	*	Ethylene glycol	107-21-1
Calcium cyanamide	156-62-7	Ethylene oxide	75-21-8
Carbon disulphide	75-15-0	Ethylene thiourea	96-45-7
Carbon tetrachloride	56-23-5	Formaldehyde	50-00-0
Catechol	120-80-9	Hexachlorocyclopentadiene	77-47-4
Chlorine	7782-50-5	Hexachloroethane	67-72-1
Chlorine dioxide	10049-04-4	Hydrazine ¹	302-01-2
Chloroacetic acid ¹	79-11-8	Hydrochloric acid	7647-01-0
Chlorobenzene	108-90-7	Hydrogen cyanide	74-90-8
Chloroethane	75-00-3	Hydrogen fluoride	7664-39-3
Chloroform	67-66-3	Hydroquinone ¹	123-31-9

NAME	CAS No.	NAME	CAS No.
Isobutyraldehyde	78-84-2	Phosphoric acid	7664-38-2
Isopropyl alcohol	67-63-0	Phosphorus ¹⁰	7723-14-0
<i>p,p'</i> -Isopropylidenediphenol	80-05-7	Phthalic anhydride	85-44-9
Isosafrole	120-58-1	Propionaldehyde	123-38-6
Lead ⁵	*	Propylene	115-07-1
Maleic anhydride	108-31-6	Propylene oxide	75-56-9
Manganese ⁵	*	Pyridine ¹	110-86-1
Mercury ⁵	*	Quinoline ¹	91-22-5
Methanol	67-56-1	<i>p</i> -Quinone	106-51-4
2-Methoxyethanol	109-86-4	Safrole	94-59-7
2-Methoxyethyl acetate	110-49-6	Selenium ⁵	*
Methyl acrylate	96-33-3	Silver ⁵	*
Methyl <i>tert</i> -butyl ether	1634-04-4	Styrene	100-42-5
<i>p,p'</i> -Methylenebis(2-chloroaniline)	101-14-4	Styrene oxide	96-09-3
Methylenebis(phenylisocyanate)	101-68-8	Sulphuric acid	7664-93-9
<i>p,p'</i> -Methylenedianiline	101-77-9	1,1,2,2-Tetrachloroethane	79-34-5
Methyl ethyl ketone	78-93-3	Tetrachloroethylene	127-18-4
Methyl iodide	74-88-4	Thiourea	62-56-6
Methyl isobutyl ketone	108-10-1	Thorium dioxide	1314-20-1
Methyl methacrylate	80-62-6	Titanium tetrachloride	7550-45-0
Michler's ketone ¹	90-94-8	Toluene	108-88-3
Molybdenum trioxide	1313-27-5	Toluene-2,4-diisocyanate	584-84-9
Naphthalene	91-20-3	Toluene-2,6-diisocyanate	91-08-7
Nickel ⁵	*	Toluenediisocyanate ⁷	26471-62-5
Nitrate ion ⁹	*	1,2,4-Trichlorobenzene	120-82-1
Nitric acid	7697-37-2	1,1,2-Trichloroethane	79-00-5
Nitrilotriacetic acid ¹	139-13-9	Trichloroethylene	79-01-6
Nitrobenzene	98-95-3	1,2,4-Trimethylbenzene	95-63-6
Nitroglycerin	55-63-0	Vanadium ²	7440-62-2
<i>p</i> -Nitrophenol ¹	100-02-7	Vinyl acetate	108-05-4
2-Nitropropane	79-46-9	Vinyl chloride	75-01-4
N-Nitrosodiphenylamine	86-30-6	Vinylidene chloride	75-35-4
Peracetic acid ¹	79-21-0	Xylene ⁷	1330-20-7
Phenol ¹	108-95-2	<i>m</i> -Xylene	108-38-3
<i>p</i> -Phenylenediamine ¹	106-50-3	<i>o</i> -Xylene	95-47-6
<i>o</i> -Phenylphenol ¹	90-43-7	<i>p</i> -Xylene	106-42-3
Phosgene	75-44-5	Zinc ⁵	*

1 "and its salts" - The CAS number corresponds to the weak acid or base. However, the NPRI listing includes the salts of these weak acids and bases. When calculating the weight of these substances and their salts, use the molecular weight of the acid or base, not the total weight of the salt.

2 "fume or dust"

3 "fibrous forms"

4 "Ammonia - total" means the total of both of ammonia (NH₃ - CAS number 7664-41-7) and the ammonium ion (NH₄⁺) in solution.

5 "and its compounds"

6 "friable form"

7 "mixed isomers"

8 "ionic"

9 "in solution at a pH of 6.0 or greater"

10 "yellow or white"

* No single CAS number applies to this NPRI listing.

**IMPORTANT NOTE CONCERNING THE FOLLOWING
PAGES**

**THE PAGES WHICH FOLLOW HAVE BEEN FILMED
TWICE IN ORDER TO OBTAIN THE BEST
REPRODUCTIVE QUALITY**

**USERS SHOULD CONSULT ALL THE PAGES
REPRODUCED ON THE FICHE IN ORDER TO OBTAIN
A COMPLETE READING OF THE TEXT.**

**REMARQUE IMPORTANTE CONCERNANT LES
PAGES QUI SUIVENT**

**LES PAGES SUIVANTES ONT ÉTÉ REPRODUITES EN
DOUBLE AFIN D'AMÉLIORER LA QUALITÉ DE
REPRODUCTION**

**LES UTILISATEURS DOIVENT CONSULTER TOUTES
LES PAGES REPRODUITES SUR LA FICHE AFIN
D'OBTENIR LA LECTURE DU TEXTE INTÉGRAL**

APPENDIX 2 - FACILITIES REPORTING THE LARGEST ON-SITE RELEASES IN 1998, BY POLLUTANT (TONNES)

Note: A maximum of 10 facilities are listed for each pollutant. Facilities reporting 1998 releases of less than 0.5 tonnes are not listed. Facilities reporting total releases of a pollutant to all media of less than one tonne had the option of reporting their releases by environmental medium or reporting only the total release to all media. "Total # of Reports" includes all pollutant reports, even those indicating zero releases.

Acetaldehyde							Total # of Reports: 17			Total Releases (tonnes): 193.265		
CAS #: 75-07-0							Province/ Territory	Air	Under- ground	Water	Land	Total Releases
NPRI ID	Company Name	Facility Name	City									
1162	Celanese Canada Inc.	Edmonton Facility	Edmonton				AB	39.510	0.000	0.000	0.000	39.510
3793	Celanese Canada Inc.	Millhaven Facility	Ernestown				ON	24.170	0.000	0.000	0.000	24.170
0928	Weyerhaeuser Canada Ltd.	Weyerhaeuser Dryden Mill Operations	Dryden				ON	22.884	0.000	0.000	0.000	22.884
4932	Aliments Burns Philp Limite	Levure Fleischmann	Lasalle				QC	19.580	0.000	0.000	0.000	19.580
3013	Norampac Inc.	Red Rock Div. Mill	Red Rock				ON	17.636	0.000	0.000	0.000	17.636
0930	Bowater Pulp and Paper Canada Inc.	Thunder Bay Operations	Thunder Bay				ON	15.840	0.000	0.000	0.000	15.840
3140	Cartons St-Laurent Inc.	Cartons St-Laurent Inc. LaTuque	LaTuque				QC	11.808	0.000	0.000	0.000	11.808
4867	Burns Philp Food Limited	Fleischmann's Yeast - Calgary Plant	Calgary				AB	11.800	0.000	0.000	0.000	11.800
2636	Abitibi-Consolidated Inc.	Division Port-Alfred	La Baie				QC	10.987	0.000	0.000	0.000	10.987
0705	Lallemand Inc.	Usine Montréal	Montréal				QC	10.500	0.000	0.000	0.000	10.500
Acetone							Total # of Reports: 165			Total Releases (tonnes): 3 512.931		
CAS #: 67-64-1							Province/ Territory	Air	Under- ground	Water	Land	Total Releases
NPRI ID	Company Name	Facility Name	City									
1162	Celanese Canada Inc.	Edmonton Facility	Edmonton				AB	621.510	110.000	0.000	0.000	731.510
1168	Celanese Canada Inc.	Drummondville Facility	Drummondville				QC	384.000	0.000	0.000	0.000	384.000
3893	General Motors of Canada Limited	Oshawa Car Assembly Plant	Oshawa				ON	212.027	0.000	0.000	0.000	212.027
5627	Maple Roll Leaf	Maple Roll Leaf - Windsor	Windsor				ON	155.170	0.000	0.000	0.000	155.170
0322	Produits Chimiques Expro Inc.		Valleyfield				QC	87.100	0.000	27.400	0.000	114.500
4210	Velcro Canada Inc.		Brampton				ON	94.552	0.000	0.000	0.000	94.552
5610	Global Upholstery Inc.		Downsview				ON	74.200	0.000	0.000	0.000	74.200
0733	Paintplas Inc.	650 Finley Ave.	Ajax				ON	74.100	0.000	0.000	0.000	74.100
44470	Alfit Manufacturing		Weston				ON	72.000	0.000	0.000	0.000	72.000
3870	General Motors of Canada Limited	Oshawa Truck Assembly Centre	Oshawa				ON	59.604	0.000	0.000	0.000	59.604



APPENDIX 2 - FACILITIES REPORTING THE LARGEST ON-SITE RELEASES IN 1998, BY POLLUTANT (TONNES)

Note: A maximum of 10 facilities are listed for each pollutant. Facilities reporting 1998 releases of less than 0.5 tonnes are not listed. Facilities reporting total releases of a pollutant to all media of less than one tonne had the option of reporting their releases by environmental medium or reporting only the total release to all media. "Total # of Reports" includes all pollutant reports, even those indicating zero releases.

Acetaldehyde		CAS #: 75-07-0		Total # of Reports: 17		Total Releases (tonnes): 193.265			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1162	Celanese Canada Inc.	Edmonton Facility	Edmonton	AB	39.510	0.000	0.000	0.000	39.510
3793	Celanese Canada Inc.	Millhaven Facility	Ernestown	ON	24.170	0.000	0.000	0.000	24.170
0928	Weyerhaeuser Canada Ltd.	Weyerhaeuser Dryden Mill Operations	Dryden	ON	22.884	0.000	0.000	0.000	22.884
4932	Aliments Burns Philp Limite	Levure Fleischmann	Lasalle	QC	19.580	0.000	0.000	0.000	19.580
3013	Norampac Inc.	Red Rock Div. Mill	Red Rock	ON	17.636	0.000	0.000	0.000	17.636
0930	Bowater Pulp and Paper Canada Inc.	Thunder Bay Operations	Thunder Bay	ON	15.840	0.000	0.000	0.000	15.840
3140	Cartons St-Laurent Inc.	Cartons St-Laurent Inc. LaTuque	LaTuque	QC	11.808	0.000	0.000	0.000	11.808
4867	Burns Philp Food Limited	Fleischmann's Yeast - Calgary Plant	Calgary	AB	11.800	0.000	0.000	0.000	11.800
2636	Abitibi-Consolidated Inc.	Division Port-Alfred	La Baie	QC	10.987	0.000	0.000	0.000	10.987
0705	Lallemand Inc.	Usine Montréal	Montréal	QC	10.500	0.000	0.000	0.000	10.500
Acetone		CAS #: 67-64-1		Total # of Reports: 165		Total Releases (tonnes): 3 512.931			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1162	Celanese Canada Inc.	Edmonton Facility	Edmonton	AB	621.510	110.000	0.000	0.000	731.510
1168	Celanese Canada Inc.	Drummondville Facility	Drummondville	QC	384.000	0.000	0.000	0.000	384.000
3893	General Motors of Canada Limited	Oshawa Car Assembly Plant	Oshawa	ON	212.027	0.000	0.000	0.000	212.027
5627	Maple Roll Leaf	Maple Roll Leaf - Windsor	Windsor	ON	155.170	0.000	0.000	0.000	155.170
0322	Produits Chimiques Expro Inc.		Valleyfield	QC	87.100	0.000	27.400	0.000	114.500
4210	Velcro Canada Inc.		Brampton	ON	94.552	0.000	0.000	0.000	94.552
5610	Global Upholstery Inc.		Downsview	ON	74.200	0.000	0.000	0.000	74.200
0733	Paintplus Inc.	650 Finley Ave.	Ajax	ON	74.100	0.000	0.000	0.000	74.100
4470	Alfit Manufacturing		Weston	ON	72.000	0.000	0.000	0.000	72.000
3870	General Motors of Canada Limited	Oshawa Truck Assembly Centre	Oshawa	ON	59.604	0.000	0.000	0.000	59.604

Acetonitrile		CAS #: 75-05-8	Total # of Reports: 1		Total Releases (tonnes): 8.167		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land
1944	Bayer Inc.	Bayer Inc. Sarnia Site	Sarnia	ON	8.167	0.000	0.000
Acrylonitrile		CAS #: 107-13-1	Total # of Reports: 8		Total Releases (tonnes): 6.205		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land
1944	Bayer Inc.	Bayer Inc. Sarnia Site	Sarnia	ON	4.950	0.000	0.000
4934	ATC Chimiques/Chemicals Inc.		Drummondville	QC	0.000	0.000	0.000
Aluminum (fume or dust)		CAS #: 7429-90-5	Total # of Reports: 46		Total Releases (tonnes): 738.783		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land
2799	Recyclage d'aluminium	Lieu Bécancour	Bécancour	QC	0.000	0.000	500.000
2801	Recyclage d'Aluminium Québec Inc.	Lieu Ragueneau	Baie-Comeau	QC	0.000	0.000	190.000
4204	Sydney Steel Corporation	Sydney Steel	Sydney	NS	0.000	0.000	15.200
5732	Wabash Alloys	Wabash Alloys Ontario	Mississauga	ON	9.682	0.000	0.000
3097	Burlington Technologies Inc.	Alumetco Division	Brantford	ON	4.830	0.000	4.830
3907	Cominco Ltd.	Cominco Ltd.	Kimberley	BC	0.000	3.185	3.187
1067	Philip Services Corp.	Sullivan Concentrator	Guelph	ON	2.903	0.000	2.903
3096	Burlington Technologies Inc.	Philip Enterprises Inc.	Burlington	ON	2.652	0.000	2.652
4752	Knoll North America Corp.	Burlington Division	Woodbridge	ON	2.204	0.000	2.204
1480	Indalloy, Division of Caradon	Metals Plant	Toronto	ON	2.020	0.000	2.020
Aluminum oxide (fibrous forms)		CAS #: 1344-28-1	Total # of Reports: 10		Total Releases (tonnes): 294.401		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land
3158	Atlas Steels Inc.	Atlas Specialty Steels	Welland	ON	0.000	0.000	281.514
2537	Safety-Kleen	Lambton Facility	Corunna	ON	0.000	0.000	12.786

Ammonia (total)		CAS #: N/A	Total # of Reports: 309		Total Releases (tonnes): 33 944.259			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Total Releases
2134	Agrium Products Inc.	Redwater Fertilizer Operations	Redwater/Municipal District of Sturgeon	AB	2 776.410	1 399.970	13.070	9.510 4 198.960
2960	Shell Canada Products Limited	Shell Scotford Refinery	Fort Saskatchewan	AB	0.000	2 700.000	0.170	0.000 2 700.170
3821	Canadian Fertilizers Limited	Medicine Hat	Medicine Hat	AB	2 471.675	0.000	25.999	0.000 2 497.674
0770	Regional Municipality of Ottawa-Carleton	Robert O. Pickard Environmental Centre	Gloucester	ON	0.000	0.000	2 415.000	0.000 2 415.000
3269	Agrium Products Inc.	Carseland Nitrogen Operations	Carseland	AB	1 959.700	0.000	0.000	1.700 1 961.400
1290	General Chemical Canada Limited	Amherstburg Plant	Amherstburg	ON	1 636.100	0.000	130.500	0.000 1 766.600
2515	Simplot Canada Limited		Brandon	MB	1 709.320	0.000	7.500	16.900 1 733.720
2274	Syncrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	1 619.026	0.000	0.000	0.000 1 619.026
3807	Hydro Agri Canada L.P.	Hydro Agri Maitland	Maitland	ON	1 603.420	0.000	10.800	0.000 1 614.220
3903	Petro-Canada	Edmonton Refinery	Edmonton	AB	0.000	1 545.987	0.694	0.000 1 546.681

Anthracene		CAS #: 120-12-7	Total # of Reports: 12		Total Releases (tonnes): 2.092			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Total Releases
3713	Dofasco Inc.		Hamilton	ON	0.610	0.000	0.000	0.610
3903	Petro-Canada	Edmonton Refinery	Edmonton	AB	0.575	0.000	0.000	0.575

Antimony (and its compounds)		CAS #: N/A	Total # of Reports: 34		Total Releases (tonnes): 26.572			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Total Releases
4000	Nova Scotia Power Inc.	Point Aconi Generating Station	Point Aconi	NS	0.000	0.000	0.000	11.200 11.200
3623	Noranda Inc.	Fonderie Horne	Rouyn-Noranda	QC	8.200	0.000	0.678	0.000 8.878
3802	Cominco Ltd.	Trail Operations	Trail	BC	0.730	0.000	4.340	0.000 5.070
4914	Vytec Corporation	London Vinyl Siding Manufacturing Plant	London	ON	0.000	0.000	0.000	0.000 0.501

Acetonitrile		CAS #: 75-05-8		Total # of Reports: 1		Total Releases (tonnes): 8.167			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1944	Bayer Inc.	Bayer Inc. Sarnia Site	Sarnia	ON	8.167	0.000	0.000	0.000	8.167

Acrylonitrile		CAS #: 107-13-1		Total # of Reports: 8		Total Releases (tonnes): 6.205			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1944	Bayer Inc.	Bayer Inc. Sarnia Site	Sarnia	ON	4.950	0.000	0.000	0.000	4.950
4834	ATC Chimiques/Chemicals Inc.		Drummondville	QC	0.000	0.000	0.000	0.000	0.000

Aluminum (fume or dust)		CAS #: 7429-90-5		Total # of Reports: 46		Total Releases (tonnes): 738.783			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
2799	Recyclage d'aluminium	Lieu Bécancour	Bécancour	QC	0.000	0.000	0.000	500.000	500.000
2801	Recyclage d'Aluminium Québec Inc.	Lieu Ragueneau	Belle-Croix	QC	0.000	0.000	0.000	190.000	190.000
4204	Sydney Steel Corporation	Sydney Steel	Sydney	NS	0.000	0.000	0.000	15.200	15.200
5732	Webush Alloys	Webush Alloys Ontario	Mississauga	ON	9.682	0.000	0.000	0.000	9.682
3097	Burlington Technologies Inc.	Alumetco Division	Brantford	ON	4.830	0.000	0.000	0.000	4.830
3807	Cominco Ltd.	Cominco Ltd. Sullivan Concentrator	Kimberley	BC	0.000	0.000	3.185	0.002	3.187
1067	Philip Services Corp.	Philip Enterprises Inc.	Guelph	ON	2.903	0.000	0.000	0.000	2.903
3096	Burlington Technologies Inc.	Burlington Division	Burlington	ON	2.652	0.000	0.000	0.000	2.652
4752	Knoll North America Corp.	Metals Plant	Woodbridge	ON	2.204	0.000	0.000	0.000	2.204
1480	Indalloy, Division of Caradon		Toronto	ON	2.020	0.000	0.000	0.000	2.020

Aluminum oxide (fibrous forms)		CAS #: 1344-28-1		Total # of Reports: 10		Total Releases (tonnes): 294.401			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
3158	Atlas Steels Inc.	Atlas Specialty Steels	Welland	ON	0.000	0.000	0.000	281.514	281.514
2537	Safety-Kleen	Lambton Facility	Corunna	ON	0.000	0.000	0.000	12.786	12.786

Ammonia (total)		CAS #: N/A	Total # of Reports: 309		Total Releases (tonnes): 33 944.259			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land
2134	Agrium Products Inc.	Redwater Fertilizer Operations	Redwater/Municipal District of Sturgeon	AB	2 776.410	1 399.970	13.070	9.510
2500	Shell Canada Products Limited	Shell Scotford Refinery	Fort Saskatchewan	AB	0.000	2 700.000	0.170	0.000
3821	Canadian Fertilizers Limited	Medicine Hat	Medicine Hat	AB	2 471.675	0.000	25.999	0.000
0770	Regional Municipality of Ottawa-Carleton	Robert O. Pickard Environmental Centre	Gloucester	ON	0.000	0.000	2 415.000	0.000
3269	Agrium Products Inc.	Carseland Nitrogen Operations	Carseland	AB	1 959.700	0.000	0.000	1.700
1200	General Chemical Canada Limited	Anheistburg Plant	Anheistburg	ON	1 636.100	0.000	130.500	0.000
2515	Simplon Canada Limited		Brandon	MB	1 709.320	0.000	7.500	16.900
2274	Synovate Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	1 619.028	0.000	0.000	0.000
3807	Hydro Agri Canada L.P.	Hydro Agri Maitland	Maitland	ON	1 603.420	0.000	10.800	0.000
3803	Petro-Canada	Edmonton Refinery	Edmonton	AB	0.000	1 545.987	0.094	0.000
Total Releases (tonnes): 33 944.259								
Anthracene		CAS #: 120-12-7	Total # of Reports: 12		Total Releases (tonnes): 2.092			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land
3713	Dofasco Inc.		Hamilton	ON	0.610	0.000	0.000	0.610
3803	Petro-Canada	Edmonton Refinery	Edmonton	AB	0.575	0.000	0.000	0.575
Total Releases (tonnes): 2.092								
Antimony (and its compounds)		CAS #: N/A	Total # of Reports: 34		Total Releases (tonnes): 26.572			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land
4000	Nova Scotia Power Inc.	Point Aconi Generating Station	Point Aconi	NS	0.000	0.000	0.000	11.200
3823	Noranda Inc.	Fonderie Horne	Rouyn-Noranda	QC	8.200	0.000	0.678	0.000
3802	Cominco Ltd.	Trail Operations	Trail	BC	0.730	0.000	4.340	0.000
4814	Vystac Corporation	London Vinyl Siding Manufacturing Plant	London	ON	0.000	0.000	0.000	0.000
Total Releases (tonnes): 26.572								

Arsenic (and its compounds)			CAS #: N/A		Total # of Reports: 73		Total Releases (tonnes): 2 081.749			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land	Total Releases	
4221	Royal Oak Mines Inc.	Giant Mine	Yellowknife	NT	1 719.839	4.826	0.481	0.000	1 725.146	
3623	Noranda Inc.	Fonderie Horne	Rouyn-Noranda	QC	0.000	79.140	0.530	0.000	79.670	
3992	Nova Scotia Power Inc.	Lingan Generating Station	New Waterford	NS	0.000	0.500	0.000	57.100	57.600	
0444	Inco Limited	Copper Cliff Smelter Complex	Copper Cliff	ON	0.000	50.111	0.000	0.000	50.111	
2537	Safety-Kleen	Lambton Facility	Corunna	ON	0.000	0.000	0.000	46.373	46.373	
4000	Nova Scotia Power Inc.	Point Aconi Generating Station	Point Aconi	NS	0.000	0.000	0.000	21.500	21.500	
1708	New Brunswick Power	Grand Lake Generation Station	Minto	NB	0.000	0.024	1.582	17.966	19.572	
1809	Ontario Power Generation Inc.	Lambton Generating Station	Courtright	ON	0.000	0.030	0.010	16.690	16.730	
3414	Hudson Bay Mining and Smelting Company Ltd.	HBM&S Co., Ltd. - Metallurgical Complex	Flin Flon	MB	0.000	13.200	0.084	0.000	13.284	
1861	Ontario Power Generation Inc.	Nanticoke Generating Station	Nanticoke	ON	0.000	0.130	0.060	12.650	12.840	

Asbestos (friable form)			CAS #: 1332-21-4		Total # of Reports: 51		Total Releases (tonnes): 3 022.159			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land	Total Releases	
5200	Browning Ferris Industries	BFI Calgary Landfill District #236	Calgary	AB	0.000	0.000	0.000	2 802.160	2 802.160	
3146	Dow Chemical Canada Inc.	Dow Chemical Canada Inc. - Sarnia	Sarnia	ON	0.000	0.000	0.000	143.122	143.122	
4871	Safety-Kleen (Ryley) Ltd.	Ryley Facility	Ryley	AB	0.000	0.000	0.000	64.510	64.510	
2230	Suncor Energy Inc.	Suncor Energy Inc. Oil Sands	Fort McMurray	AB	0.000	0.000	0.000	6.800	6.800	
2274	Synchrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	0.000	0.000	0.000	4.430	4.430	
207	DuPont Canada Inc.	Maitland Site	Maitland	ON	0.000	0.000	0.000	0.508	0.508	

Asbestos (friable form)			CAS #: 1332-21-4		Total # of Reports: 51		Total Releases (tonnes): 3 022.159			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land	Total Releases	
5200	Browning Ferris Industries	BFI Calgary Landfill District #236	Calgary	AB	0.000	0.000	0.000	2 802.160	2 802.160	
3146	Dow Chemical Canada Inc.	Dow Chemical Canada Inc. - Sarnia	Sarnia	ON	0.000	0.000	0.000	143.122	143.122	
4871	Safety-Kleen (Ryley) Ltd.	Ryley Facility	Ryley	AB	0.000	0.000	0.000	64.510	64.510	
2230	Suncor Energy Inc.	Suncor Energy Inc. Oil Sands	Fort McMurray	AB	0.000	0.000	0.000	6.800	6.800	
2274	Synchrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	0.000	0.000	0.000	4.430	4.430	
207	DuPont Canada Inc.	Maitland Site	Maitland	ON	0.000	0.000	0.000	0.508	0.508	

CAS #: 71-43-2										Total # of Reports: 113				Total Releases (tonnes): 1 585.782			
Benzene										Province/ Territory				Under- ground			
NPRI ID	Company Name	Facility Name	City							Air	Water	Land	Total Releases				
3713	Dofasco Inc.		Hamilton							ON	290.690	0.000	0.000	0.000	290.693		
2984	Stelco Inc.	Hilton Works	Hamilton							ON	178.500	0.000	0.120	0.000	178.620		
1070	Algoma Steel Inc	Algoma Steel Main Works	Sault Ste. Marie							ON	163.783	0.000	0.042	0.000	163.825		
3855	Lake Erie Steel Company Ltd.		Nanticoke							ON	92.752	0.000	0.000	0.000	92.752		
2274	Synchrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray							AB	65.193	0.000	0.000	0.000	65.193		
1197	Domtar Papers	Cornwall Business Unit	Cornwall							ON	43.557	0.000	0.004	0.000	43.561		
22230	Suncor Energy Inc.	Suncor Energy Inc. Oil Sands	Fort McMurray							AB	42.779	0.000	0.000	0.000	42.779		
21218	Shell Canada Ltd.	Peace River Complex	Peace River							AB	0.661	39.593	0.004	0.026	40.284		
0424	Imperial Oil Resources Limited	Bonnie Glen Gas Plant	Thorsby							AB	38.060	0.000	0.000	0.000	38.060		
3962	Shell Canada Products Limited	Sarnia Manufacturing Centre	Corunna							ON	36.503	0.000	0.012	0.009	36.524		
CAS #: 92-52-4										Total # of Reports: 13				Total Releases (tonnes): 11.983			
Biphenyl										Province/ Territory				Under- ground			
NPRI ID	Company Name	Facility Name	City							Air	Water	Land	Total Releases				
3422	DuPont Canada Inc.	Kingston Site	Kingston							ON	4.600	0.000	0.000	0.000	4.600		
4700	NOVA Chemicals Ltd.	St. Clair River Site	Corunna							ON	3.950	0.000	0.000	0.000	3.950		
3793	Celanese Canada Inc.	Millhaven Facility	Ernestown							ON	2.000	0.000	0.000	0.000	2.000		
3897	Petro-Canada	Raffinerie de Montréal	Montréal							QC	0.613	0.000	0.000	0.000	0.613		
CAS #: 103-23-1										Total # of Reports: 16				Total Releases (tonnes): 11.104			
Bis(2-ethylhexyl) adipate										Province/ Territory				Under- ground			
NPRI ID	Company Name	Facility Name	City							Air	Water	Land	Total Releases				
269	Ford Motor Company	Essex Aluminum Plant	Windsor							ON	11.057	0.000	0.000	0.000	11.057		

Arsenic (and its compounds)			CAS #: N/A		Total # of Reports: 73		Total Releases (tonnes): 2 081.749			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
4221	Royal Oak Mines Inc.	Giant Mine	Yellowknife	NT	4.826	1 719.839	0.481	0.000	1 725.146	
3623	Noranda Inc.	Fonderie Horne	Rouyn-Noranda	QC	79.140	0.000	0.530	0.000	79.670	
3992	Nova Scotia Power Inc.	Lingan Generating Station	New Waterford	NS	0.500	0.000	0.000	57.100	57.600	
0444	Inco Limited	Copper Cliff Smelter Complex	Copper Cliff	ON	50.111	0.000	0.000	0.000	50.111	
2537	Safety-Kleen	Lambton Facility	Corunna	ON	0.000	0.000	0.000	46.373	46.373	
4000	Nova Scotia Power Inc.	Point Aconi Generating Station	Point Aconi	NS	0.000	0.000	0.000	21.500	21.500	
1708	New Brunswick Power	Grand Lake Generation Station	Minto	NB	0.024	0.000	1.582	17.966	19.572	
1809	Ontario Power Generation Inc.	Lambton Generating Station	Courtright	ON	0.030	0.000	0.010	16.690	16.730	
3414	Hudson Bay Mining and Smelting Company Ltd.	HBM&S Co., Ltd. - Metallurgical Complex	Flin Flon	MB	13.200	0.000	0.084	0.000	13.284	
1861	Ontario Power Generation Inc.	Nanticoke Generating Station	Nanticoke	ON	0.130	0.000	0.060	12.650	12.840	

Asbestos (friable form)			CAS #: 1332-21-4		Total # of Reports: 51		Total Releases (tonnes): 3 022.159			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
5200	Browning Ferris Industries	BFI Calgary Landfill District #236	Calgary	AB	0.000	0.000	0.000	2 802.160	2 802.160	
3146	Dow Chemical Canada Inc.	Dow Chemical Canada Inc. - Sarnia	Sarnia	ON	0.000	0.000	0.000	143.122	143.122	
4871	Safety-Kleen (Ryley) Ltd.	Ryley Facility	Ryley	AB	0.000	0.000	0.000	64.510	64.510	
2230	Suncor Energy Inc.	Suncor Energy Inc. Oil Sands	Fort McMurray	AB	0.000	0.000	0.000	6.800	6.800	
2274	Syncrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	0.000	0.000	0.000	4.430	4.430	
207	DuPont Canada Inc.	Maitland Site	Maitland	ON	0.000	0.000	0.000	0.508	0.508	

Benzene		CAS #: 71-43-2		Total # of Reports: 113		Total Releases (tonnes): 1 585.782			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
3713	Dofasco Inc.		Hamilton	ON	290.690	0.000	0.003	0.000	290.693
2984	Stelco Inc.	Hilton Works	Hamilton	ON	178.500	0.000	0.120	0.000	178.620
1070	Algoma Steel Inc.	Algoma Steel Main Works	Sault Ste. Marie	ON	163.783	0.000	0.042	0.000	163.825
3855	Lake Erie Steel Company Ltd.		Nanticoke	ON	92.752	0.000	0.000	0.000	92.752
2274	Syncrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	65.193	0.000	0.000	0.000	65.193
1197	Domtar Papers	Cornwall Business Unit	Cornwall	ON	43.557	0.000	0.004	0.000	43.561
2230	Suncor Energy Inc.	Suncor Energy Inc. Oil Sands	Fort McMurray	AB	42.779	0.000	0.000	0.000	42.779
2128	Shell Canada Ltd.	Peace River Complex	Peace River	AB	0.661	39.593	0.004	0.026	40.284
0424	Imperial Oil Resources Limited	Bonnie Glen Gas Plant	Thorsby	AB	38.060	0.000	0.000	0.000	38.060
3962	Shell Canada Products Limited	Sarnia Manufacturing Centre	Corunna	ON	36.503	0.000	0.012	0.009	36.524
Biphenyl		CAS #: 92-52-4		Total # of Reports: 13		Total Releases (tonnes): 11.983			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
3422	DuPont Canada Inc.	Kingston Site	Kingston	ON	4.600	0.000	0.000	0.000	4.600
4700	NOVA Chemicals Ltd.	St. Clair River Site	Corunna	ON	3.950	0.000	0.000	0.000	3.950
3793	Celanese Canada Inc.	Millhaven Facility	Ernestown	ON	2.000	0.000	0.000	0.000	2.000
3897	Petro-Canada	Raffinerie de Montréal	Montréal	QC	0.613	0.000	0.000	0.000	0.613
Bis(2-ethylhexyl) adipate		CAS #: 103-23-1		Total # of Reports: 16		Total Releases (tonnes): 11.104			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1269	Ford Motor Company	Essex Aluminum Plant	Windsor	ON	11.057	0.000	0.000	0.000	11.057

Bis(2-ethylhexyl) phthalate		CAS #: 117-81-7		Total # of Reports: 36		Total Releases (tonnes): 8.593			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1083	Produits American Blitrite Ltée		Sherbrooke	QC	4.400	0.000	0.000	0.000	4.400
4544	RCR International Inc.		Mississauga	ON	1.730	0.000	0.000	0.000	1.730
4935	Armstrong World Industries Canada Ltd.	Montréal Plant	Montréal	QC	0.980	0.000	0.000	0.000	0.980
3799	Crown Cork & Seal Canada Inc.	Crown Cork & Seal Canada Inc. - Plt. 234	Montréal	QC	0.740	0.000	0.000	0.000	0.740

Bromomethane		CAS #: 74-83-9		Total # of Reports: 1		Total Releases (tonnes): 6.304			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
4722	Les Aliments Borden Canada	Usine Notre-Dame	Montréal	QC	6.304	0.000	0.000	0.000	6.304

1,3-Butadiene		CAS #: 106-99-0		Total # of Reports: 13		Total Releases (tonnes): 106.032			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1944	Bayer Inc.	Bayer Inc. Sarnia Site	Sarnia	ON	64.770	0.000	0.000	0.000	64.770
1776	NOVA Chemicals (Canada) Ltd.	NOVA Chemicals (Canada) Ltd. - Corunna Site	Corunna	ON	17.220	0.000	0.000	0.000	17.220
3634	Pétromont, société en commandite	Usine de Varennes	Varennes	QC	8.537	0.000	0.000	0.000	8.537
1779	NOVA Chemicals Corporation	Joffre Site	Red Deer	AB	6.186	0.000	0.000	0.000	6.186
2274	Syncrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	4.034	0.000	0.000	0.000	4.034
0280	Dow Chemical Canada Inc.	Western Canada Operations	Fort Saskatchewan	AB	1.934	0.000	0.000	0.000	1.934
0281	Dow Chemical Canada Inc.	Complexe de Varennes	Varennes	QC	1.907	0.000	0.000	0.000	1.907
3704	Imperial Oil	IOL Sarnia Refinery	Sarnia	ON	0.884	0.000	0.000	0.000	0.884

<i>i</i> -Butyl alcohol		CAS #: 78-83-1		Total # of Reports: 38		Total Releases (tonnes): 163.604			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1866	Palliser Furniture Ltd.	DeFehr Division	Winnipeg	MB	33.456	0.000	0.000	0.000	33.456
3893	General Motors of Canada Limited	Oshawa Car Assembly Plant	Oshawa	ON	32.165	0.000	0.000	0.000	32.165
3478	DaimlerChrysler	Pillette Road Truck Assembly Plant	Windsor	ON	27.274	0.000	0.000	0.000	27.274
5753	Inscap	Holland Landing	Holland Landing	ON	16.645	0.000	0.000	0.000	16.645
0476	Kitchcraft of Canada Ltd.	Manufacturing Plant	Winnipeg	MB	11.000	0.000	0.000	0.000	11.000
3019	Rollstap		Concord	ON	10.277	0.000	0.000	0.000	10.277
1215	Ford Motor Company	Ontario Truck	Oakville	ON	9.849	0.000	0.000	0.000	9.849
3419	Ford Motor Company	Oakville Assembly Plant	Oakville	ON	9.548	0.000	0.000	0.000	9.548
2521	PolyCon Industries		Guelph	ON	3.622	0.000	0.000	0.000	3.622
5619	Chemcraft International Inc.	Port Hope	Port Hope	ON	2.466	0.000	0.000	0.000	2.466

<i>n</i> -Butyl alcohol		CAS #: 71-36-3		Total # of Reports: 84		Total Releases (tonnes): 1 130.495			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
3893	General Motors of Canada Limited	Oshawa Car Assembly Plant	Oshawa	ON	145.070	0.000	0.000	0.000	145.070
0538	Crown Cork & Seal Canada Inc.	Crown Cork & Seal Canada Inc. - Plt.245	Weston	ON	112.031	0.000	0.000	0.000	112.031
3116	Ball Packaging Products Canada, Inc.	Ball Packaging Products Canada, Inc.	Whitby	ON	103.305	0.000	0.000	0.000	103.305
1105	AT Plastics Inc.	AT Plastics Inc. Packaging	Brampton	ON	97.300	0.000	0.000	0.000	97.300
3883	Ford Motor Company	St. Thomas Assembly Plant	St. Thomas	ON	82.250	0.000	0.000	0.000	82.250
3419	Ford Motor Company	Oakville Assembly Plant	Oakville	ON	72.360	0.000	0.000	0.000	72.360
3216	Crown Cork & Seal Canada Inc.	Crown Cork & Seal Canada Inc. - Plt.244	Concord	ON	66.643	0.000	0.000	0.000	66.643
0557	Crown Cork & Seal Canada Inc.	Crown Cork & Seal Canada Inc. - Plt.235	Calgary	AB	66.046	0.000	0.000	0.000	66.046
3870	General Motors of Canada Limited	Oshawa Truck Assembly Centre	Oshawa	ON	49.947	0.000	0.000	0.000	49.947
3764	Peregrine Oshawa Inc.	Oshawa Plant	Oshawa	ON	40.929	0.000	0.000	0.000	40.929

Bis(2-ethylhexyl) phthalate		CAS #: 117-81-7	Total # of Reports: 36		Total Releases (tonnes): 8,593				
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1083	Produits American Blirrite Ltée		Sherbrooke	QC	4,400	0,000	0,000	0,000	4,400
4544	RCR International Inc.		Mississauga	ON	1,730	0,000	0,000	0,000	1,730
4935	Armstrong World Industries Canada Ltd.	Montréal Plant	Montréal	QC	0,980	0,000	0,000	0,000	0,980
3799	Crown Cork & Seal Canada Inc.	Crown Cork & Seal Canada Inc. - Pit 234	Montréal	QC	0,740	0,000	0,000	0,000	0,740

Bromomethane		CAS #: 74-83-9	Total # of Reports: 1		Total Releases (tonnes): 6,304				
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
4722	Les Aliments Borden Canada	Usine Notre-Dame	Montréal	QC	6,304	0,000	0,000	0,000	6,304

1,3-Butadiene		CAS #: 106-99-0	Total # of Reports: 13		Total Releases (tonnes): 106,032				
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1944	Bayer Inc.	Bayer Inc. Sarnia Site	Sarnia	ON	64,770	0,000	0,000	0,000	64,770
1776	NOVA Chemicals (Canada) Ltd.	NOVA Chemicals (Canada) Ltd. - Corunna Site	Corunna	ON	17,220	0,000	0,000	0,000	17,220
3634	Pétromont, société en commandite	Usine de Varennes	Varennes	QC	8,537	0,000	0,000	0,000	8,537
1779	NOVA Chemicals Corporation	Joffre Site	Red Deer	AB	6,186	0,000	0,000	0,000	6,186
2274	Syncrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	4,034	0,000	0,000	0,000	4,034
0280	Dow Chemical Canada Inc.	Western Canada Operations	Fort Saskatchewan	AB	1,934	0,000	0,000	0,000	1,934
0281	Dow Chemical Canada Inc.	Complexe de Varennes	Varennes	QC	1,907	0,000	0,000	0,000	1,907
3704	Imperial Oil	IOL Sarnia Refinery	Sarnia	ON	0,884	0,000	0,000	0,000	0,884

<i>i</i> -Butyl alcohol		CAS #: 78-83-1	Total # of Reports: 38		Total Releases (tonnes): 163.604			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases
1866	Palliser Furniture Ltd.	DeFehr Division	Winnipeg	MB	0.000	0.000	0.000	33.456
3893	General Motors of Canada Limited	Oshawa Car Assembly Plant	Oshawa	ON	0.000	0.000	0.000	32.165
3478	DaimlerChrysler	Pillette Road Truck Assembly Plant	Windsor	ON	0.000	0.000	0.000	27.274
5753	Inscape	Holland Landing	Holland Landing	ON	0.000	0.000	0.000	16.645
0476	Kitchcraft of Canada Ltd.	Manufacturing Plant	Winnipeg	MB	0.000	0.000	0.000	11.000
3019	Rollstamp		Concord	ON	0.000	0.000	0.000	10.277
1215	Ford Motor Company	Ontario Truck	Oakville	ON	0.000	0.000	0.000	9.849
3419	Ford Motor Company	Oakville Assembly Plant	Oakville	ON	0.000	0.000	0.000	9.548
2521	PolyCon Industries		Guelph	ON	0.000	0.000	0.000	3.622
5619	Chemcraft International Inc.	Port Hope	Port Hope	ON	0.000	0.000	0.000	2.466
<i>n</i> -Butyl alcohol		CAS #: 71-36-3	Total # of Reports: 84		Total Releases (tonnes): 1 130.495			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases
3893	General Motors of Canada Limited	Oshawa Car Assembly Plant	Oshawa	ON	0.000	0.000	0.000	145.070
0538	Crown Cork & Seal Canada Inc.	Crown Cork & Seal Canada Inc. - Plt.245	Weston	ON	0.000	0.000	0.000	112.031
3116	Ball Packaging Products Canada, Inc.	Ball Packaging Products Canada, Inc.	Whitby	ON	0.000	0.000	0.000	103.305
1105	AT Plastics Inc.	AT Plastics Inc. Packaging	Brampton	ON	0.000	0.000	0.000	97.300
3883	Ford Motor Company	St. Thomas Assembly Plant	St. Thomas	ON	0.000	0.000	0.000	82.250
3419	Ford Motor Company	Oakville Assembly Plant	Oakville	ON	0.000	0.000	0.000	72.360
3216	Crown Cork & Seal Canada Inc.	Crown Cork & Seal Canada Inc. - Plt.244	Concord	ON	0.000	0.000	0.000	66.643
0557	Crown Cork & Seal Canada Inc.	Crown Cork & Seal Canada Inc. - Plt.235	Calgary	AB	0.000	0.000	0.000	66.046
3870	General Motors of Canada Limited	Oshawa Truck Assembly Centre	Oshawa	ON	0.000	0.000	0.000	49.947
3764	Peregrine Oshawa Inc.	Oshawa Plant	Oshawa	ON	0.000	0.000	0.000	40.929

tert-Butyl alcohol			CAS #: 75-65-0		Total # of Reports: 3		Total Releases (tonnes): 172.126			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
11162	Celanese Canada Inc.	Edmonton Facility	Edmonton	AB	5.443	150.000	0.000	0.003	155.446	
3198	3M Canada Company (London)	London, Ontario	London	ON	12.260	0.000	0.000	0.000	12.260	
1944	Bayer Inc.	Bayer Inc. Sarnia Site	Sarnia	ON	4.420	0.000	0.000	0.000	4.420	

Butyl benzyl phthalate			CAS #: 85-68-7		Total # of Reports: 13		Total Releases (tonnes): 6.423			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
4708	Bay Mills Limited	Bayex Division	St. Catharines	ON	4.750	0.000	0.000	0.000	4.750	
2420	Domco Inc.	Domco Inc.	Farnham	QC	1.163	0.000	0.000	0.000	1.163	

Cadmium (and its compounds)			CAS #: N/A		Total # of Reports: 24		Total Releases (tonnes): 47.002			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
3414	Hudson Bay Mining and Smelting Company Ltd.	HBM&S Co., Ltd. - Metallurgical Complex	Flin Flon	MB	26.777	0.000	0.156	0.000	26.933	
0444	Inco Limited	Copper Cliff Smelter Complex	Copper Cliff	ON	7.009	0.000	0.000	0.000	7.009	
4024	Noranda Inc.	Brunswick Smelter	Belledune	NB	2.930	0.000	0.266	0.000	3.196	
3623	Noranda Inc.	Fonderie Horne	Rouyn-Noranda	QC	2.550	0.000	0.130	0.000	2.680	
2537	Safety-Kleen	Lambton Facility	Corunna	ON	0.000	0.000	0.000	2.622	2.622	
2938	Noranda Inc. CEZinc	Usine d'extraction de zinc	Salaberry-de-Valleyfield	QC	1.723	0.000	0.025	0.000	1.748	
3802	Cominco Ltd.	Trail Operations	Trail	BC	0.345	0.000	0.530	0.000	0.875	
4204	Sydney Steel Corporation	Sydney Steel	Sydney	NS	0.000	0.000	0.000	0.000	0.750	
			District of Cochrane	ON	0.571	0.000	0.054	0.000	0.625	

Carbon disulphide		CAS #: 75-15-0		Total # of Reports: 29		Total Releases (tonnes): 2 196.079			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
3758	Petro-Canada	Hanlan-Robb Gas Plant	Edson	AB	365.000	0.000	0.000	0.000	365.000
2781	Shell Canada Limited	Shell Burnt Timber Complex	Didsbury	AB	272.900	0.000	0.000	0.000	272.900
2119	Shell Canada Limited	Jumping Pound Complex	Calgary	AB	258.000	0.000	0.000	0.000	258.000
0683	Chevron Canada Resources	Kaybob South #3 Gas Plant	Fox Creek	AB	221.000	0.000	0.000	0.000	221.000
1902	Wascana Energy Inc. (Subsidiary of Canadian Occidental)	Balzac Gas Plant	Balzac	AB	206.628	0.000	0.000	0.000	206.628
4140	Amoco Canada Petroleum Company	East Crossfield Gas Plant	Crossfield	AB	166.779	0.000	0.000	0.000	166.779
0407	Husky Oil Operations Limited	Ram River Gas Plant	Rocky Mountain House	AB	148.920	0.000	0.000	0.000	148.920
4138	Amoco Canada Petroleum Company	West Whitecourt Plant	N/A	AB	91.700	0.000	0.000	0.000	91.700
4150	Amoco Canada Petroleum Company	Kaybob South Sour Gas Plant	Fox Creek	AB	75.505	0.000	0.000	0.000	75.505
4157	Amoco Canada Petroleum Company	Steelman Gas Plant	N/A	SK	67.600	0.000	0.000	0.000	67.600

Chlorine		CAS #: 7782-50-5		Total # of Reports: 180		Total Releases (tonnes): 505.806			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1221	Fraser Papers Inc. (Canada)	Edmundston Operations	Edmundston	NB	96.000	0.000	0.000	0.000	96.000
1617	Repap New Brunswick Inc.	Kraft Pulp and Paper Division	Miramichi	NB	84.000	0.000	0.000	0.000	84.000
0930	Bowater Pulp and Paper Canada Inc.	Thunder Bay Operations	Thunder Bay	ON	52.350	0.000	0.000	0.000	52.350
3406	Société d'électrolyse et de chimie Alcan	Usine Arvida	Jonquière	QC	27.180	0.000	0.000	0.000	27.180
0279	Norkraft Quévillon Inc.	Usine de Lebel-sur-Quévillon	Lebel-sur-Quévillon	QC	18.300	0.000	0.000	0.000	18.300
1473	Inco Limited	Manitoba Division	Thompson	MB	15.162	0.000	0.000	0.000	15.162
0815	Kimberly-Clark Inc.	Kimberly Clark Nova Scotia	New Glasgow	NS	14.905	0.000	0.000	0.000	14.905
0683	Chevron Canada Resources	Kaybob South #3 Gas Plant	Fox Creek	AB	0.145	14.365	0.000	0.000	14.510
2074	Sterling Pulp Chemicals Ltd.	Sterling Pulp Chemicals (Sask) Ltd.	Saskatoon	SK	14.461	0.000	0.039	0.000	14.500
4771	Regional Municipality of Halton	Skyway Waste Water Treatment Plant	Burlington	ON	0.000	0.000	12.093	0.000	12.093

tert-Butyl alcohol		CAS #: 75-65-0	Total # of Reports: 3		Total Releases (tonnes): 172.126				
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1162	Celanese Canada Inc.	Edmonton Facility	Edmonton	AB	5.443	150.000	0.000	0.003	155.446
3198	3M Canada Company (London)	London, Ontario	London	ON	12.260	0.000	0.000	0.000	12.260
1944	Bayer Inc.	Bayer Inc. Sarnia Site	Sarnia	ON	4.420	0.000	0.000	0.000	4.420
Butyl benzyl phthalate		CAS #: 85-68-7	Total # of Reports: 13		Total Releases (tonnes): 6.423				
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
4708	Bay Mills Limited	Bayex Division	St. Catharines	ON	4.750	0.000	0.000	0.000	4.750
2420	Domco Inc.	Domco Inc.	Farnham	QC	1.163	0.000	0.000	0.000	1.163
Cadmium (and its compounds)		CAS #: N/A	Total # of Reports: 24		Total Releases (tonnes): 47.002				
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
3414	Hudson Bay Mining and Smelting Company Ltd.	HBM&S Co., Ltd. - Metallurgical Complex	Flin Flon	MB	26.777	0.000	0.156	0.000	26.933
0444	Inco Limited	Copper Cliff Smelter Complex	Copper Cliff	ON	7.009	0.000	0.000	0.000	7.009
4024	Noranda Inc.	Brunswick Smelter	Bellefleur	NB	2.930	0.000	0.266	0.000	3.196
3623	Noranda Inc.	Fonderie Horne	Rouyn-Noranda	QC	2.550	0.000	0.130	0.000	2.680
2537	Safety-Kleen	Lambton Facility	Corunna	ON	0.000	0.000	0.000	2.622	2.622
2938	Noranda Inc. CEZinc	Usine d'extraction de zinc	Salaberry-de-Valleyfield	QC	1.723	0.000	0.025	0.000	1.748
3802	Cominco Ltd.	Trail Operations	Trail	BC	0.345	0.000	0.530	0.000	0.875
4204	Sydney Steel Corporation	Sydney Steel	Sydney	NS	0.000	0.000	0.000	0.000	0.750
2815	Falconbridge Limited - Kidd Metallurgical Div.	Kidd Metallurgical Site	District of Cochrane	ON	0.571	0.000	0.054	0.000	0.625

Carbon disulphide		CAS #: 75-15-0	Total # of Reports: 29		Total Releases (tonnes): 2 196.079			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Total Releases
3758	Petro-Canada	Hanlan-Robb Gas Plant	Edson	AB	365.000	0.000	0.000	365.000
2781	Shell Canada Limited	Shell Burnt Timber Complex	Didsbury	AB	272.900	0.000	0.000	272.900
2119	Shell Canada Limited	Jumping Pound Complex	Calgary	AB	258.000	0.000	0.000	258.000
0683	Chevron Canada Resources	Kaybob South #3 Gas Plant	Fox Creek	AB	221.000	0.000	0.000	221.000
1902	Wascana Energy Inc. (Subsidiary of Canadian Occidental)	Balzac Gas Plant	Balzac	AB	206.628	0.000	0.000	206.628
4140	Amoco Canada Petroleum Company	East Crossfield Gas Plant	Crossfield	AB	166.779	0.000	0.000	166.779
0407	Husky Oil Operations Limited	Ram River Gas Plant	Rocky Mountain House	AB	148.920	0.000	0.000	148.920
4138	Amoco Canada Petroleum Company	West Whitecourt Plant	N/A	AB	91.700	0.000	0.000	91.700
4150	Amoco Canada Petroleum Company	Kaybob South Sour Gas Plant	Fox Creek	AB	75.505	0.000	0.000	75.505
4157	Amoco Canada Petroleum Company	Steelman Gas Plant	N/A	SK	67.600	0.000	0.000	67.600

Chlorine		CAS #: 7782-50-5	Total # of Reports: 180		Total Releases (tonnes): 505.806			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Total Releases
1221	Fraser Papers Inc. (Canada)	Edmundston Operations	Edmundston	NB	96.000	0.000	0.000	96.000
1617	Repap New Brunswick Inc.	Kraft Pulp and Paper Division	Miramichi	NB	84.000	0.000	0.000	84.000
0930	Bowater Pulp and Paper Canada Inc.	Thunder Bay Operations	Thunder Bay	ON	52.350	0.000	0.000	52.350
3406	Société d'électrolyse et de chimie Alcan	Usine Arvida	Jonquière	QC	27.180	0.000	0.000	27.180
0279	Norkraft Quévillon Inc.	Usine de Lebel-sur-Quévillon	Lebel-sur-Quévillon	QC	18.300	0.000	0.000	18.300
1473	Inco Limited	Manitoba Division	Thompson	MB	15.162	0.000	0.000	15.162
0815	Kimberly-Clark Inc.	Kimberly Clark Nova Scotia	New Glasgow	NS	14.905	0.000	0.000	14.905
0683	Chevron Canada Resources	Kaybob South #3 Gas Plant	Fox Creek	AB	0.145	14.365	0.000	14.510
2074	Sterling Pulp Chemicals Ltd.	Sterling Pulp Chemicals (Sask) Ltd.	Saskatoon	SK	14.461	0.000	0.039	14.500
4771	Regional Municipality of Halton	Skyway Waste Water Treatment Plant	Burlington	ON	0.000	0.000	12.093	12.093

Chlorine dioxide			CAS #: 10049-04-4		Total # of Reports: 51		Total Releases (tonnes): 916.619			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
11197	Domtar Papers	Cornwall Business Unit	Cornwall	ON	98.645	0.000	0.000	0.000	98.645	
21281	St. Anne-Nackawic Pulp Company Ltd.		Nackawic	NB	78.500	0.000	0.000	0.000	78.500	
2604	Irving Pulp & Paper, Ltd./Irving Tissue Company	Irving Pulp & Paper and Irving Tissue Company	Saint John	NB	74.931	0.000	0.000	0.000	74.931	
1596	Tembec Industries Inc.	Pulp Group, Smooth Rock Falls Division	Smooth Rock Falls	ON	74.500	0.000	0.000	0.000	74.500	
1617	Repap New Brunswick Inc.	Kraft Pulp and Paper Division	Miramichi	NB	64.300	0.000	0.000	0.000	64.300	
0930	Bowater Pulp and Paper Canada Inc.	Thunder Bay Operations	Thunder Bay	ON	49.850	0.000	0.000	0.000	49.850	
0723	Pacifica Papers Inc.	Powell River Division	Powell River	BC	43.000	0.000	0.000	0.000	43.000	
2991	Weldwood of Canada Ltd.	Hinton Division	Hinton	AB	39.980	0.000	0.000	0.000	39.980	
1797	Northwood Inc.	Northwood Pulp Mill	Prince George	BC	35.600	0.000	0.000	0.000	35.600	
2924	Weyerhaeuser Canada Ltd.	Kamloops Pulp Division	Kamloops	BC	32.000	0.000	0.000	0.000	32.000	
Chloroethane			CAS #: 75-00-3		Total # of Reports: 3		Total Releases (tonnes): 185.354			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
0281	Dow Chemical Canada Inc.	Complexe de Varennes	Varennes	QC	76.563	0.000	0.000	0.000	76.563	
0282	Dow Chemical Canada Inc.	Dow Chemical Canada Inc. - Weston	Weston	ON	58.049	0.000	0.000	0.000	58.049	
0280	Dow Chemical Canada Inc.	Western Canada Operations	Fort Saskatchewan	AB	50.742	0.000	0.000	0.000	50.742	

Chloroform													
CAS #: 67-66-3													
Total # of Reports: 17													
Total Releases (tonnes): 204.027													
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases				
0223	Daishowa-Marubeni Int'l	Peace River Pulp Division	Peace River	AB	91.300	0.000	1.770	0.000	93.070				
1797	Northwood Inc.	Northwood Pulp Mill	Prince George	BC	35.700	0.000	0.000	0.000	35.700				
3140	Cartons St-Laurent Inc.	Cartons St-Laurent Inc. LaTuque	LaTuque	QC	13.911	0.000	1.729	0.000	15.640				
0279	Norkraft Quévillon Inc.	Usine de Lebel-sur-Quévillon	Lebel-sur-Quévillon	QC	14.817	0.000	0.513	0.000	15.330				
0930	Bowater Pulp and Paper Canada Inc.	Thunder Bay Operations	Thunder Bay	ON	13.920	0.000	0.881	0.000	14.801				
3185	E.B. Eddy Forest Products Ltd.	Espanola Division	Espanola	ON	12.815	0.000	0.120	0.000	12.935				
2607	Kimberly-Clark Corporation	Kimberly-Clark Forest Products, Inc.	Terrace Bay	ON	8.150	0.000	0.036	0.000	8.186				
1221	Fraser Papers Inc. (Canada)	Edmundston Operations	Edmundston	NB	7.510	0.000	0.000	0.000	7.510				
2963	Shell Chemicals Canada Ltd.	Scottford Chemical Plant	Fort Saskatchewan	AB	0.000	0.000	0.000	0.000	0.718				
Chloromethane													
CAS #: 74-87-3													
Total # of Reports: 1													
Total Releases (tonnes): 385.142													
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases				
1944	Bayer Inc.	Bayer Inc. Sarnia Site	Sarnia	ON	385.128	0.000	0.014	0.000	385.142				
Chromium (and its compounds)													
CAS #: N/A													
Total # of Reports: 279													
Total Releases (tonnes): 1 959.896													
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases				
0444	Inco Limited	Copper Cliff Smelter Complex	Copper Cliff	ON	0.000	0.000	0.000	1 545.000	1 545.000				
1467	Inco Limited	Copper Cliff Nickel Refinery	Copper Cliff	ON	0.165	0.000	0.000	56.000	56.165				
5219	TVX Gold Inc./High River Gold Mines Ltd.	New Britannia Mine	Snow Lake	MB	0.000	0.000	0.000	48.000	48.000				
1809	Ontario Power Generation Inc.	Lambton Generating Station	Courtright	ON	0.130	0.000	0.020	37.710	37.860				
1861	Ontario Power Generation Inc.	Nanticoke Generating Station	Nanticoke	ON	1.040	0.000	0.060	36.410	37.510				
2284	TransAlta Utilities Corporation	Sundance Thermal Generating Plant	Duffield	AB	0.310	0.000	0.000	36.000	36.310				
5663	Bombardier Transportation	Mass Transit - North America	Millhaven	ON	25.580	0.000	0.000	0.000	25.580				
3649	Ispat Sidbec Inc.	Acierie	Contrecoeur	QC	0.660	0.000	0.083	18.250	18.993				
2286	TransAlta Utilities Corporation	Keephills Thermal Generating Plant	Duffield	AB	0.080	0.000	0.000	17.500	17.580				
1106	AltaSteel Ltd.	AltaSteel Ltd.	Edmonton	AB	2.105	0.000	0.001	11.243	13.349				

Chlorine dioxide

CAS #: 10049-04-4

Total # of Reports: 51

Total Releases (tonnes): 916.619

NPRI ID	Company Name	Facility Name	City	Provincia/ Territory	Air	Under- ground	Water	Land	Total Releases
1197	Domtar Papers	Cornwall Business Unit	Cornwall	ON	98.645	0.000	0.000	0.000	98.645
2181	St. Anne-Nackawic Pulp Company Ltd.		Nackawic	NB	78.500	0.000	0.000	0.000	78.500
2604	Irving Pulp & Paper, Ltd./Irving Tissue Company	Irving Pulp & Paper and Irving Tissue Company	Saint John	NB	74.931	0.000	0.000	0.000	74.931
1596	Tembec Industries Inc.	Pulp Group, Smooth Rock Falls Division	Smooth Rock Falls	ON	74.500	0.000	0.000	0.000	74.500
1617	Repap New Brunswick Inc.	Kraft Pulp and Paper Division	Miramichi	NB	64.300	0.000	0.000	0.000	64.300
0830	Bowater Pulp and Paper Canada Inc.	Thunder Bay Operations	Thunder Bay	ON	49.850	0.000	0.000	0.000	49.850
0723	Pacifica Papers Inc.	Powell River Division	Powell River	BC	43.000	0.000	0.000	0.000	43.000
2991	Weldwood of Canada Ltd.	Hinton Division	Hinton	AB	39.980	0.000	0.000	0.000	39.980
1797	Northwood Inc.	Northwood Pulp Mill	Prince George	BC	35.600	0.000	0.000	0.000	35.600
2924	Weyerhaeuser Canada Ltd.	Kamloops Pulp Division	Kamloops	BC	32.000	0.000	0.000	0.000	32.000

Chloroethane

CAS #: 75-00-3

Total # of Reports: 3

Total Releases (tonnes): 185.354

NPRI ID	Company Name	Facility Name	City	Provincia/ Territory	Air	Under- ground	Water	Land	Total Releases
0281	Dow Chemical Canada Inc.	Complexe de Varennes	Varennes	QC	76.563	0.000	0.000	0.000	76.563
0282	Dow Chemical Canada Inc.	Dow Chemical Canada Inc. - Weston	Weston	ON	58.049	0.000	0.000	0.000	58.049
0280	Dow Chemical Canada Inc.	Western Canada Operations	Fort Saskatchewan	AB	50.742	0.000	0.000	0.000	50.742

Chloroform		CAS #: 67-66-3		Total # of Reports: 17		Total Releases (tonnes): 204.027			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
0223	Daishowa-Marubeni Int'l	Peace River Pulp Division	Peace River	AB	91.300	0.000	1.770	0.000	93.070
1797	Northwood Inc.	Northwood Pulp Mill	Prince George	BC	35.700	0.000	0.000	0.000	35.700
3140	Cartons St-Laurent Inc.	Cartons St-Laurent Inc. LaTuque	LaTuque	QC	13.911	0.000	1.729	0.000	15.640
0279	Northcraft Quévillon Inc.	Usine de Label-sur-Quévillon	Label-sur-Quévillon	QC	14.817	0.000	0.513	0.000	15.330
0930	Bowater Pulp and Paper Canada Inc.	Thunder Bay Operations	Thunder Bay	ON	13.920	0.000	0.881	0.000	14.801
3185	E.B. Eddy Forest Products Ltd.	Espanola Division	Espanola	ON	12.815	0.000	0.120	0.000	12.935
2607	Kimberly-Clark Corporation	Kimberly-Clark Forest Products, Inc.	Terrace Bay	ON	8.150	0.000	0.036	0.000	8.186
1221	Fraser Papers Inc. (Canada)	Edmundston Operations	Edmundston	NB	7.510	0.000	0.000	0.000	7.510
2963	Shell Chemicals Canada Ltd.	Scottford Chemical Plant	Fort Saskatchewan	AB	0.000	0.000	0.000	0.000	0.718
Chloromethane		CAS #: 74-87-3		Total # of Reports: 1		Total Releases (tonnes): 385.142			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1944	Bayer Inc.	Bayer Inc. Sarnia Site	Sarnia	ON	385.128	0.000	0.014	0.000	385.142
Chromium (and its compounds)		CAS #: N/A		Total # of Reports: 279		Total Releases (tonnes): 1 959.896			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
0444	Inco Limited	Copper Cliff Smelter Complex	Copper Cliff	ON	0.000	0.000	0.000	1 545.000	1 545.000
1467	Inco Limited	Copper Cliff Nickel Refinery	Copper Cliff	ON	0.165	0.000	0.000	56.000	56.165
5219	TVX Gold Inc./High River Gold Mines Ltd.	New Britannia Mine	Snow Lake	MB	0.000	0.000	0.000	48.000	48.000
1809	Ontario Power Generation Inc.	Lambton Generating Station	Courtright	ON	0.130	0.000	0.020	37.710	37.860
1861	Ontario Power Generation Inc.	Nanticoke Generating Station	Nanticoke	ON	1.040	0.000	0.060	36.410	37.510
2284	TransAlta Utilities Corporation	Sundance Thermal Generating Plant	Duffield	AB	0.310	0.000	0.000	36.000	36.310
5663	Bombardier Transportation	Mass Transit - North America	Millhaven	ON	25.580	0.000	0.000	0.000	25.580
3649	Isipat Sidbec Inc.	Acierie	Contrecoeur	QC	0.660	0.000	0.083	18.250	18.993
2286	TransAlta Utilities Corporation	Keephills Thermal Generating Plant	Duffield	AB	0.080	0.000	0.000	17.500	17.580
1106	AltaSteel Ltd.	AltaSteel Ltd.	Edmonton	AB	2.105	0.000	0.001	11.243	13.349

Cobalt (and its compounds)			CAS #: N/A		Total # of Reports: 32		Total Releases (tonnes): 72.164			
NPRI ID	Company Name	Facility Name	City	Provinces/ Territory	Air	Under- ground	Water	Land	Total Releases	
2284	TransAlta Utilities Corporation	Sundance Thermal Generating Plant	Duffield	AB	0.270	0.000	0.000	16.600	16.870	
1861	Ontario Power Generation Inc.	Nanticoke Generating Station	Nanticoke	ON	0.000	0.000	0.010	14.810	14.900	
1471	Inco Limited	Inco Limited Port Colborne Refinery	Port Colborne	ON	0.202	0.000	0.156	13.360	13.718	
1869	Ontario Power Generation Inc.	Lambton Generating Station	Courtright	ON	0.020	0.000	0.010	11.130	11.160	
1467	Inco Limited	Copper Cliff Nickel Refinery	Copper Cliff	ON	5.798	0.000	0.000	0.000	5.798	
1307	DuPont Canada Inc.	Maitland Site	Maitland	ON	4.930	0.000	0.120	0.000	5.050	
1473	Inco Limited	Manitoba Division	Thompson	MB	1.560	0.000	0.192	0.000	1.752	
1256	Falconbridge Limited	Smelter Complex	Falconbridge	ON	1.464	0.000	0.223	0.003	1.690	
0394	Homestake Canada Inc.	Nickel Plate Mine	Above Hedley	BC	0.000	0.000	0.536	0.000	0.536	

Copper (and its compounds)			CAS #: N/A		Total # of Reports: 339		Total Releases (tonnes): 1 245.556			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
5759	Siemens-Westinghouse	Coil Manufacturing Company	Mississauga	ON	0.000	0.000	0.000	153.987	153.987	
5246	Gerdau Metal Steel Inc.	Mandak Metal Processors	Selkirk	MB	0.000	0.000	0.000	138.000	138.000	
0444	Inco Limited	Copper Cliff Smelter Complex	Copper Cliff	ON	97.264	0.000	0.000	0.000	97.264	
3823	Noranda Inc.	Fondria Horne	Rouyn-Noranda	QC	85.690	0.000	2.185	0.000	87.875	
3414	Hudson Bay Mining and Smelting Company Ltd.	HBM&S Co., Ltd. - Metallurgical Complex	Flin Flon	MB	78.542	0.000	0.143	0.000	78.685	
2815	Falconbridge Limited - Kidd Metallurgical Div.	Kidd Metallurgical Site	District of Cochrane	ON	65.669	0.000	0.553	0.000	66.252	
1469	Inco Limited	Copper Refinery	Copper Cliff	ON	63.360	0.000	0.000	0.000	63.360	
3835	Isipet Subco Inc.	Subco-Feruni (Isipet) Inc. Centrocobalt	Centrocobalt	QC	0.000	0.000	0.002	62.500	62.502	
3824	Co-Steel Lasco		Whitby	ON	0.133	0.000	0.030	54.370	54.533	
1861	Ontario Power Generation Inc.	Nanticoke Generating Station	Nanticoke	ON	2.670	0.000	5.500	37.650	45.820	

Cresol (mixed isomers and their salts) CAS #: 1319-77-3				Total # of Reports: 6	Total Releases (tonnes): 1.803			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land
0953	Alcatel Canada Wire	Simcoe Plant	Simcoe	ON	0.000	1.530	0.000	0.000
m-Cresol (and its salts) CAS #: 108-39-4				Total # of Reports: 3	Total Releases (tonnes): 2.001			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land
0953	Alcatel Canada Wire	Simcoe Plant	Simcoe	ON	0.000	2.001	0.000	0.000
p-Cresol (and its salts) CAS #: 106-44-5				Total # of Reports: 2	Total Releases (tonnes): 1.147			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land
0953	Alcatel Canada Wire	Simcoe Plant	Simcoe	ON	0.000	1.147	0.000	0.000
Cumene CAS #: 98-82-8				Total # of Reports: 20	Total Releases (tonnes): 45.065			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land
4907	Budd Canada Inc.	Budd Canada Kitchener	Kitchener	ON	0.000	16.797	0.000	0.000
2274	Synovate Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	0.000	14.841	0.000	0.000
3704	Imperial Oil	IOL Sarnia Refinery	Sarnia	ON	0.000	3.035	0.052	0.000
3897	Petro-Canada	Raffinerie de Montréal	Montréal	QC	0.000	2.061	0.000	0.000
2963	Shell Chemicals Canada Ltd.	Scotford Chemical Plant	Fort Saskatchewan	AB	0.000	1.552	0.000	0.000
3701	Imperial Oil	IOL Nanticoke Refinery	Nanticoke	ON	0.000	1.324	0.012	0.000
4048	Consumers' Co-operative Refineries Ltd./ NewGrade Energy Inc.	Refinery/Upgrader Complex Regina	Regina	SK	0.000	0.964	0.000	0.000
3054	Imperial Oil	IOL Dartmouth Refinery	Dartmouth	NS	0.000	0.907	0.026	0.015
3071	Sunoco Inc.	Sarnia Refinery	Sarnia	ON	0.000	0.825	0.000	0.000
1452	Elf Atochem Canada	Béancour	Béancour	QC	0.000	0.808	0.000	0.000

Cobalt (and its compounds)			CAS #: N/A	Total # of Reports: 32		Total Releases (tonnes): 72.164			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
2284	TransAlta Utilities Corporation	Sundance Thermal Generating Plant	Duffield	AB	0.270	0.000	0.000	16.600	16.870
1861	Ontario Power Generation Inc.	Nanticoke Generating Station	Nanticoke	ON	0.080	0.000	0.010	14.810	14.900
1471	Inco Limited	Inco Limited Port Colborne Refinery	Port Colborne	ON	0.202	0.000	0.156	13.360	13.718
1809	Ontario Power Generation Inc.	Lambton Generating Station	Courtright	ON	0.020	0.000	0.010	11.130	11.160
1467	Inco Limited	Copper Cliff Nickel Refinery	Copper Cliff	ON	5.798	0.000	0.000	0.000	5.798
1207	DuPont Canada Inc.	Maitland Site	Maitland	ON	4.930	0.000	0.120	0.000	5.050
1473	Inco Limited	Manitoba Division	Thompson	MB	1.560	0.000	0.192	0.000	1.752
1236	Falconbridge Limited	Smelter Complex	Falconbridge	ON	1.464	0.000	0.223	0.003	1.690
0394	Homestake Canada Inc.	Nickel Plate Mine	Above Hedley	BC	0.000	0.000	0.536	0.000	0.536

Copper (and its compounds)			CAS #: N/A	Total # of Reports: 339		Total Releases (tonnes): 1 245.556			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
5759	Siemens-Westinghouse	Coil Manufacturing Company	Mississauga	ON	0.000	0.000	0.000	153.987	153.987
5246	Gerdau MRM Steel Inc.	Mandak Metal Processors	Selkirk	MB	0.000	0.000	0.000	138.080	138.080
0444	Inco Limited	Copper Cliff Smelter Complex	Copper Cliff	ON	97.264	0.000	0.000	0.000	97.264
3623	Noranda Inc.	Fonderie Horne	Rouyn-Noranda	QC	85.690	0.000	2.185	0.000	87.875
3414	Hudson Bay Mining and Smelting Company Ltd.	HBM&S Co., Ltd. - Metallurgical Complex	Flin Flon	MB	78.542	0.000	0.143	0.000	78.685
2815	Falconbridge Limited - Kidd Metallurgical Div.	Kidd Metallurgical Site	District of Cochrane	ON	65.699	0.000	0.553	0.000	66.252
1469	Inco Limited	Copper Refinery	Copper Cliff	ON	63.360	0.000	0.000	0.000	63.360
3655	Ispat Sidbec Inc.	Sidbec-Feruni (Ispat) Inc. Contrecoeur	Contrecoeur	QC	0.000	0.000	0.002	62.500	62.502
3824	Co-Steel Lasco		Whitby	ON	0.133	0.000	0.030	54.370	54.533
1861	Ontario Power Generation Inc.	Nanticoke Generating Station	Nanticoke	ON	2.670	0.000	5.500	37.650	45.820

Cresol (mixed isomers and their salts) CAS #: 1319-77-3				Total # of Reports: 6		Total Releases (tonnes): 1.803		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land Releases
0953	Alcatel Canada Wire	Simcoe Plant	Simcoe	ON	1.530	0.000	0.000	1.530
m-Cresol (and its salts) CAS #: 108-39-4				Total # of Reports: 3		Total Releases (tonnes): 2.001		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land Releases
0953	Alcatel Canada Wire	Simcoe Plant	Simcoe	ON	2.001	0.000	0.000	2.001
p-Cresol (and its salts) CAS #: 106-44-5				Total # of Reports: 2		Total Releases (tonnes): 1.147		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land Releases
0953	Alcatel Canada Wire	Simcoe Plant	Simcoe	ON	1.147	0.000	0.000	1.147
Cumene CAS #: 98-82-8				Total # of Reports: 20		Total Releases (tonnes): 45.065		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land Releases
4907	Budd Canada Inc.	Budd Canada Kitchener	Kitchener	ON	16.797	0.000	0.000	16.797
2274	Syncrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	14.841	0.000	0.000	14.841
3704	Imperial Oil	IOL Sarnia Refinery	Sarnia	ON	3.035	0.000	0.052	3.087
3897	Petro-Canada	Raffinerie de Montréal	Montréal	QC	2.061	0.000	0.000	2.061
2963	Shell Chemicals Canada Ltd.	Scotford Chemical Plant	Fort Saskatchewan	AB	1.552	0.000	0.000	1.552
3701	Imperial Oil	IOL Nanticoke Refinery	Nanticoke	ON	1.324	0.000	0.012	1.336
4048	Consumers' Co-operative Refineries Ltd. / NewGrade Energy Inc.	Refinery/Upgrader Complex	Regina	SK	0.964	0.000	0.000	0.964
3698	Imperial Oil	IOL Dartmouth Refinery	Dartmouth	NS	0.907	0.000	0.026	0.948
3071	Sunoco Inc.	Sarnia Refinery	Sarnia	ON	0.825	0.000	0.000	0.825
1492	Elf Atochem Canada		Bécancour	QC	0.808	0.000	0.000	0.808

Cyanides (ionic) CAS #: N/A Total # of Reports: 34 Total Releases (tonnes): 5.247

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1941	Placer Dome North America	Dome Mine	South Porcupine	ON	0.000	0.000	0.923	0.000	0.923
0577	Dextran Products Limited		Toronto	ON	0.900	0.000	0.000	0.000	0.900
5656	Placer Dome North America	Muskelwhite Mine	Thunder Bay	ON	0.834	0.000	0.032	0.000	0.866
1935	Placer Dome North America	Campbell Mine	Balmertown	ON	0.000	0.000	0.500	0.000	0.500

Cyclohexane CAS #: 110-82-7 Total # of Reports: 90 Total Releases (tonnes): 1 999.143

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
4700	NOVA Chemicals Ltd.	St. Clair River Site	Corunna	ON	1 057 000	0.000	0.800	0.000	1 057 800
1944	Bayer Inc.	Bayer Inc. Sarnia Site	Sarnia	ON	549 682	0.000	0.000	0.000	549 682
1207	DuPont Canada Inc.	Maitland Site	Maitland	ON	116 700	0.000	0.000	0.000	116 700
2230	Suncor Energy Inc.	Suncor Energy Inc. Oil Sands	Fort McMurray	AB	50 300	0.000	0.000	0.000	50 300
4048	Consumers' Co-operative Refineries Ltd./ NewGrade Energy Inc.	Refinery/Upgrader Complex	Regina	SK	36 292	0.000	0.000	0.000	36 292
2274	Syncrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	14 343	0.000	0.000	0.000	14 343
4316	North Atlantic Refining Ltd.	North Atlantic Refinery	Come by Chance	NF	13 307	0.000	0.077	0.000	13 384
0397	Honda of Canada Mfg., a Div. of Honda Canada Inc.	Alliston Plant 1	Alliston	ON	12 500	0.000	0.000	0.000	12 500
3704	Imperial Oil	IOL Sarnia Refinery	Sarnia	ON	11 875	0.000	0.159	0.000	12 034
3962	Shell Canada Products Limited	Sarnia Manufacturing Centre	Corunna	ON	10 356	0.000	0.000	0.000	10 356

p-Dichlorobenzene CAS #: 106-46-7 Total # of Reports: 4 Total Releases (tonnes): 9.140

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
0787	Napierville Refineries Inc.	Napierville	Napierville	QC	9.040	0.000	0.000	0.000	9.040

1,2-Dichloroethane		CAS #: 107-06-2	Total # of Reports: 6		Total Releases (tonnes): 26,360				
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
0280	Dow Chemical Canada Inc.	Western Canada Operations	Fort Saskatchewan	AB	23,578	0.000	0.000	0.352	23,930
4646	Dow Chemical Canada Inc.	West Coast Distribution Centre	North Vancouver	BC	2,254	0.000	0.140	0.000	2,394

Dichloromethane		CAS #: 75-09-2	Total # of Reports: 62		Total Releases (tonnes): 2,215,110				
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
2567	Carpenter Canada Limited		Woodbridge	ON	374,490	0.000	0.000	0.000	374,490
2469	Novopharm Limited		Toronto	ON	274,196	0.000	0.000	0.000	274,196
2601	Domfoam International Inc.	Domfoam	Saint-Léonard	QC	260,000	0.000	0.000	0.000	260,000
4552	Vitafoam Products Canada Ltd.	Vita - Toronto	Downsview	ON	218,770	0.000	0.000	0.000	218,770
4428	Valle Foam Industries Inc.	Valle 1	Brampton	ON	196,900	0.000	0.000	0.000	196,900
2472	Novopharm Limited		Markham	ON	168,505	0.000	0.000	0.000	168,505
2422	Foamex Canada Inc.	Foamex Toronto	Toronto	ON	153,582	0.000	0.000	0.000	153,582
0152	Carpenter Canada Ltd.	Calgary Division	Calgary	AB	95,080	0.000	0.000	0.000	95,080
2149	Duo-fast Industries Canada Inc.	Manufacture de clous et agraffes	Montréal	QC	94,740	0.000	0.000	0.000	94,740
4429	Valle Foam Industries Inc.	Valle 2	Brampton	ON	56,500	0.000	0.000	0.000	56,500

Cyanides (ionic)		CAS #: N/A		Total # of Reports: 34		Total Releases (tonnes): 5,247			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1941	Placer Dome North America	Dome Mine	South Porcupine	ON	0.000	0.000	0.923	0.000	0.923
0577	Deztran Products Limited		Toronto	ON	0.900	0.000	0.000	0.000	0.900
5656	Placer Dome North America	Muskelwhite Mine	Thunder Bay	ON	0.834	0.000	0.032	0.000	0.866
1935	Placer Dome North America	Campbell Mine	Balmertown	ON	0.000	0.000	0.500	0.000	0.500
Cyclohexane									
		CAS #: 110-82-7		Total # of Reports: 90		Total Releases (tonnes): 1,999,143			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
4700	NOVA Chemicals Ltd.	St. Clair River Site	Corunna	ON	1,057,000	0.000	0.800	0.000	1,057,800
1944	Bayer Inc.	Bayer Inc. Sarnia Site	Sarnia	ON	549,682	0.000	0.000	0.000	549,682
1207	DuPont Canada Inc.	Maitland Site	Maitland	ON	116,700	0.000	0.000	0.000	116,700
2230	Suncor Energy Inc.	Suncor Energy Inc. Oil Sands	Fort McMurray	AB	50,300	0.000	0.000	0.000	50,300
4048	Consumers' Co-operative Refineries Ltd./ NewGrade Energy Inc.	Refinery/Upgrader Complex	Regina	SK	36,292	0.000	0.000	0.000	36,292
2274	Synco Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	14,343	0.000	0.000	0.000	14,343
4316	North Atlantic Refining Ltd.	North Atlantic Refinery	Come by Chance	NF	13,307	0.000	0.077	0.000	13,384
0397	Honda of Canada Mfg. a Div. of Honda Canada Inc.	Alliston Plant 1	Alliston	ON	12,500	0.000	0.000	0.000	12,500
3704	Imperial Oil	IOL Sarnia Refinery	Sarnia	ON	11,875	0.000	0.159	0.000	12,034
3962	Shell Canada Products Limited	Sarnia Manufacturing Centre	Corunna	ON	10,356	0.000	0.000	0.000	10,356
p-Dichlorobenzene									
		CAS #: 106-46-7		Total # of Reports: 4		Total Releases (tonnes): 9,140			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
0787	Napierville Refineries Inc.	Napierville	Napierville	QC	9,040	0.000	0.000	0.000	9,040

1,2-Dichloroethane		CAS #: 107-06-2		Total # of Reports: 6		Total Releases (tonnes): 26,360			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
0280	Dow Chemical Canada Inc.	Western Canada Operations	Fort Saskatchewan	AB	23,578	0.000	0.000	0.352	23,930
4646	Dow Chemical Canada Inc.	West Coast Distribution Centre	North Vancouver	BC	2,254	0.000	0.140	0.000	2,394
Dichloromethane									
		CAS #: 75-09-2		Total # of Reports: 62		Total Releases (tonnes): 2 215,110			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
2567	Carpenter Canada Limited		Woodbridge	ON	374,490	0.000	0.000	0.000	374,490
2469	Novopharm Limited		Toronto	ON	274,196	0.000	0.000	0.000	274,196
2601	Domfoam International Inc.	Domfoam	Saint-Léonard	QC	260,000	0.000	0.000	0.000	260,000
4552	Vitafoam Products Canada Ltd.	Vita - Toronto	Downsview	ON	218,770	0.000	0.000	0.000	218,770
4428	Valle Foam Industries Inc.	Valle 1	Brampton	ON	196,900	0.000	0.000	0.000	196,900
2472	Novopharm Limited		Markham	ON	168,505	0.000	0.000	0.000	168,505
2422	Foamex Canada Inc.	Foamex Toronto	Toronto	ON	153,582	0.000	0.000	0.000	153,582
0152	Carpenter Canada Ltd.	Calgary Division	Calgary	AB	95,080	0.000	0.000	0.000	95,080
2149	Duo-fast Industries Canada Inc.	Manufacture de clous et agraffes	Montréal	QC	94,740	0.000	0.000	0.000	94,740
4429	Valle Foam Industries Inc.	Valle 2	Brampton	ON	56,500	0.000	0.000	0.000	56,500

Diethanolamine (and its salts)			CAS #: 111-42-2		Total # of Reports: 66		Total Releases (tonnes): 974.627			
NPRID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
0407	Husky Oil Operations Limited	Ram River Gas Plant	Rocky Mountain House	AB	0.000	236.110	0.000	0.800	236.910	
0409	Husky Oil Operations Limited	Husky Oil Lloydminster Upgrader	Lloydminster	SK	0.000	200.000	0.000	0.000	200.000	
4138	Amoco Canada Petroleum Company	West Whitecourt Plant	N/A	AB	0.000	179.400	0.000	0.000	179.400	
0483	Cheriton Canada Resources	Kayboe South #3 Gas Plant	Fox Creek	AB	0.000	176.500	0.000	0.000	176.500	
4304	Westcoast Energy Inc.	Fort Nelson Gas Plant	Fort Nelson	BC	56.360	0.000	0.000	0.000	56.360	
2134	Agrium Products Inc.	Redwater Fertilizer Operations	Redwater/Municipal District of Sturgeon	AB	17.170	12.530	0.000	0.000	29.700	
1902	Wascana Energy Inc. (Subsidiary of Canadian Occidental)	Balzac Gas Plant	Balzac	AB	0.325	21.220	0.000	0.250	21.795	
0245	Cheriton Canada Resources	Acheson Sour Gas Plant	Spruce Grove	AB	0.000	15.863	0.000	0.000	15.863	
1374	Gulf Midstream Services Ltd.	Strachan Gas Plant	Rocky Mountain House	AB	0.000	10.890	0.000	0.000	10.890	
3931	Ussler Petroleum Limited	Winborne Gas Plant	Winborne	AB	0.000	9.310	0.000	0.345	9.655	
Dimethyl phthalate			CAS #: 131-11-3		Total # of Reports: 3		Total Releases (tonnes): 3.200			
NPRID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
2561	Camoplast Inc.	Division Roxton Falls	Roxton Falls	QC	2.200	0.000	0.000	0.000	2.200	
2564	Camoplast Inc.	Division Princeville	Princeville	QC	1.000	0.000	0.000	0.000	1.000	
1,4-Dioxane			CAS #: 123-91-1		Total # of Reports: 4		Total Releases (tonnes): 3.036			
NPRID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
3793	Celanese Canada Inc.	Millhaven Facility	Ernestown	ON	0.230	0.000	1.100	0.000	1.330	
1438	Huntsman Corporation Canada Inc.	Guelph Plant	Guelph	ON	1.300	0.000	0.000	0.000	1.300	
2-Ethoxyethanol			CAS #: 110-80-5		Total # of Reports: 3		Total Releases (tonnes): 16.820			
NPRID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
5627	Maple Roll Leaf	Maple Roll Leaf - Windsor	Windsor	ON	16.720	0.000	0.000	0.000	16.720	

2-Ethoxyethyl acetate		CAS #: 111-15-9		Total # of Reports: 5		Total Releases (tonnes): 4,442			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
5627	Maple Roll Leaf	Maple Roll Leaf - Windsor	Windsor	ON	4,242	0,000	0,000	0,000	4,242

Ethyl benzene		CAS #: 100-41-4		Total # of Reports: 121		Total Releases (tonnes): 768,328			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
2230	Suncor Energy Inc.	Suncor Energy Inc. Oil Sands	Fort McMurray	AB	69,150	0,000	0,000	0,000	69,150
2274	Synoride Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	67,397	0,000	0,000	0,000	67,397
0397	Honda of Canada Mfg., a Div. of Honda Canada Inc.	Alliston Plant 1	Alliston	ON	52,900	0,000	0,000	0,000	52,900
1215	Ford Motor Company	Ontario Truck	Oakville	ON	43,217	0,000	0,000	0,000	43,217
1785	NOVA Chemicals (Canada) Ltd.	NOVA Chemicals (Canada) Ltd. - Sarnia Site	Sarnia	ON	41,107	0,000	0,003	0,000	41,110
3883	Ford Motor Company	St. Thomas Assembly Plant	St. Thomas	ON	39,654	0,000	0,000	0,000	39,654
0733	Paintplas Inc.	650 Finley Ave.	Ajax	ON	39,600	0,000	0,000	0,000	39,600
3478	DaimlerChrysler	Pilliette Road Truck Assembly Plant	Windsor	ON	34,662	0,000	0,000	0,000	34,662
3893	General Motors of Canada Limited	Oshawa Car Assembly Plant	Oshawa	ON	33,918	0,000	0,000	0,000	33,918
2656	Ventra Plastics	Peterborough Plant	Peterborough	ON	30,740	0,000	0,000	0,000	30,740

Diethanolamine (and its salts)				CAS #: 111-42-2		Total # of Reports: 66		Total Releases (tonnes): 974.627		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
0407	Husky Oil Operations Limited	Ram River Gas Plant	Rocky Mountain House	AB	0.000	236.110	0.000	0.800	236.910	
0409	Husky Oil Operations Limited	Husky Oil Lloydminster Upgrader	Lloydminster	SK	0.000	200.000	0.000	0.000	200.000	
4138	Amoco Canada Petroleum Company	West Whitecourt Plant	N/A	AB	0.000	179.400	0.000	0.000	179.400	
0683	Chevron Canada Resources	Kaybob South #3 Gas Plant	Fox Creek	AB	0.000	176.500	0.000	0.000	176.500	
4304	Westcoast Energy Inc.	Fort Nelson Gas Plant	Fort Nelson	BC	56.360	0.000	0.000	0.000	56.360	
2134	Agrium Products Inc.	Redwater Fertilizer Operations	Redwater/Municipal District of Sturgeon	AB	17.170	12.530	0.000	0.000	29.700	
1902	Wascana Energy Inc. (Subsidiary of Canadian Occidental)	Balzac Gas Plant	Balzac	AB	0.325	21.220	0.000	0.250	21.795	
0686	Chevron Canada Resources	Acheson Sour Gas Plant	Spruce Grove	AB	0.000	15.863	0.000	0.000	15.863	
1374	Gulf Midstream Services Ltd.	Strachan Gas Plant	Rocky Mountain House	AB	0.000	10.890	0.000	0.000	10.890	
3931	Ulster Petroleums Limited	Wimborne Gas Plant	Wimborne	AB	0.000	9.310	0.000	0.345	9.655	
Dimethyl phthalate				CAS #: 131-11-3		Total # of Reports: 3		Total Releases (tonnes): 3.200		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
2561	Camoplast Inc.	Division Roxton Falls	Roxton Falls	QC	2.200	0.000	0.000	0.000	2.200	
2564	Camoplast Inc.	Division Princeville	Princeville	QC	1.000	0.000	0.000	0.000	1.000	
1,4-Dioxane				CAS #: 123-91-1		Total # of Reports: 4		Total Releases (tonnes): 3.036		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
3793	Celanese Canada Inc.	Millhaven Facility	Ernestown	ON	0.230	0.000	1.100	0.000	1.330	
1436	Huntsman Corporation Canada Inc.	Guelph Plant	Guelph	ON	1.300	0.000	0.000	0.000	1.300	
2-Ethoxyethanol				CAS #: 110-80-5		Total # of Reports: 3		Total Releases (tonnes): 16.820		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
5627	Maple Roll Leaf	Maple Roll Leaf - Windsor	Windsor	ON	16.720	0.000	0.000	0.000	16.720	

2-Ethoxyethyl acetate		CAS #: 111-15-9		Total # of Reports: 5		Total Releases (tonnes): 4.442			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
5627	Maple Roll Leaf	Maple Roll Leaf - Windsor	Windsor	ON	4.242	0.000	0.000	0.000	4.242

Ethyl benzene		CAS #: 100-41-4		Total # of Reports: 121		Total Releases (tonnes): 768.328			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
2230	Suncor Energy Inc.	Suncor Energy Inc. Oil Sands	Fort McMurray	AB	69.150	0.000	0.000	0.000	69.150
2274	Synchrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	67.397	0.000	0.000	0.000	67.397
0397	Honda of Canada Mfg., a Div. of Honda Canada Inc.	Alliston Plant 1	Alliston	ON	52.900	0.000	0.000	0.000	52.900
1215	Ford Motor Company	Ontario Truck	Oakville	ON	43.217	0.000	0.000	0.000	43.217
1785	NOVA Chemicals (Canada) Ltd.	NOVA Chemicals (Canada) Ltd. - Sarnia Site	Sarnia	ON	41.107	0.000	0.003	0.000	41.110
3883	Ford Motor Company	St. Thomas Assembly Plant	St. Thomas	ON	39.654	0.000	0.000	0.000	39.654
0733	Paintplas Inc.	650 Finley Ave.	Ajax	ON	39.600	0.000	0.000	0.000	39.600
3478	DaimlerChrysler	Pillette Road Truck Assembly Plant	Windsor	ON	34.662	0.000	0.000	0.000	34.662
3893	General Motors of Canada Limited	Oshawa Car Assembly Plant	Oshawa	ON	33.918	0.000	0.000	0.000	33.918
2656	Ventra Plastics	Peterborough Plant	Peterborough	ON	30.740	0.000	0.000	0.000	30.740

Ethylene		CAS #: 74-85-1		Total # of Reports: 44		Total Releases (tonnes): 2 564.388			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
0280	Dow Chemical Canada Inc.	Western Canada Operations	Fort Saskatchewan	AB	678.800	0.000	0.000	0.000	678.800
1708	NOVA Chemicals Ltd.	Moore Site	Sarnia	ON	285.600	0.000	0.000	0.000	285.600
0126	AT Plastics Inc.	Edmonton Site	Edmonton	AB	259.000	0.000	0.000	0.000	259.000
2316	Union Carbide Canada Inc.	Prentiss Chemical Manufacturing Plant	Lacombe County	AB	191.830	0.000	0.000	0.000	191.830
3634	Pétromont, société en commandite	Usine de Varennes	Varennes	QC	176.262	0.000	0.000	0.000	176.262
3146	Dow Chemical Canada Inc.	Dow Chemical Canada Inc. - Sarnia	Sarnia	ON	129.737	0.000	0.000	0.000	129.737
1779	NOVA Chemicals Corporation	Joffre Site	Red Deer	AB	126.335	0.000	0.000	0.000	126.335
2274	Synchrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	112.065	0.000	0.000	0.000	112.065
1776	NOVA Chemicals (Canada) Ltd.	NOVA Chemicals (Canada) Ltd. - Corunna Site	Corunna	ON	70.000	0.000	0.000	0.000	70.000
3635	Pétromont, société en commandite	Usine de Montréal Est	Montréal Est	QC	69.752	0.000	0.000	0.000	69.752

Ethylene glycol		CAS #: 107-21-1		Total # of Reports: 282		Total Releases (tonnes): 3 530.395			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
4451	Canadian Airlines	Pearson Airport Terminal 3	Mississauga	ON	0.000	0.000	0.000	385.500	385.500
1026	Air Canada - Toronto	Toronto International Airport	Toronto	ON	0.000	0.000	0.000	313.451	313.451
2316	Union Carbide Canada Inc.	Prentiss Chemical Manufacturing Plant	Lacombe County	AB	150.284	0.000	0.000	71.480	221.764
4457	Canadian Airlines	Calgary International Airport	Calgary	AB	0.000	0.000	0.000	193.360	193.360
4138	Amoco Canada Petroleum Company	West Whitecourt Plant	N/A	AB	0.000	182.200	0.000	0.000	182.200
4455	Canadian Airlines	Edmonton International Airport	Edmonton	AB	0.000	0.000	0.000	166.120	166.120
1006	Air Canada - Ottawa	Ottawa International Airport	Ottawa	ON	0.000	0.000	0.000	155.046	155.046
1426	Hudson General Aviation Services Inc.		Gloucester	ON	0.000	0.000	0.000	144.173	144.173
1427	Hudson General Aviation Services Inc.		Mississauga	ON	0.000	0.000	0.000	129.032	129.032
3838	Air Canada - St. John's	St. John's International Airport	St. John's	NF	0.000	0.000	0.000	113.802	113.802

Ethylene oxide		CAS #: 75-21-8	Total # of Reports: 8		Total Releases (tonnes): 19,799			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases
0280	Dow Chemical Canada Inc.	Western Canada Operations	Fort Saskatchewan	AB	4,868	0.000	0.000	5,193
0494	Chinook Group	Sombra Operations	Sombra	ON	4,290	0.000	0.000	4,290
2316	Union Carbide Canada Inc.	Prentiss Chemical Manufacturing Plant	Lacombe County	AB	4,037	0.000	0.000	4,037
1436	Huntman Corporation Canada Inc.	Guelph Plant	Guelph	ON	2,400	0.000	0.000	2,400
5644	Griffith Micro Science, Inc.	Toronto Plant	Scarborough	ON	2,270	0.000	0.000	2,270
3146	Dow Chemical Canada Inc.	Dow Chemical Canada Inc. - Sarnia7	Sarnia	ON	0.000	0.000	0.000	0.93
0800	Rhodia Canada Inc.	Cooksville Plant	Mississauga	ON	0.652	0.000	0.000	0.652

Formaldehyde		CAS #: 50-00-0	Total # of Reports: 92		Total Releases (tonnes): 1 448,108			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases
2636	Abitibi-Consolidated Inc.	Division Port-Alfred	La Baie	QC	0.700	157,000	0.000	157,700
2760	Weyerhaeuser Canada Ltd.	Drayton Valley O.S.B. Mill	Drayton Valley	AB	157,700	0.000	0.000	157,700
2762	Weyerhaeuser Canada Ltd.	Edson O.S.B. Mill	Edson	AB	93,120	0.000	0.000	93,120
2764	Weyerhaeuser Canada Ltd.	Slave Lake O.S.B. Mill	Slave Lake	AB	92,700	0.000	0.000	92,700
0758	Uniboard Canada Inc.	Division Mont-Laurier	Mont-Laurier	QC	82,800	0.000	0.000	82,800
4386	Malette Quebec Inc.	Panneaux Malette OSB	Saint-Georges de Champlain	QC	71,908	0.000	0.000	71,908
4060	Uniboard Canada Inc.	Division Val-d'Or	Val-d'Or	QC	71,200	0.000	0.000	71,200
5442	Uniboard Canada Inc.	MDP La Baie Inc.	La Baie	QC	69,200	0.000	0.000	69,200
2989	Uniboard Canada Inc.	Division Sayabec	Sayabec	QC	67,884	0.000	0.000	67,884
4830	Ranger Board Ltd.		Blue Ridge	AB	60,233	0.000	0.000	60,233

Ethylene		CAS #: 74-85-1		Total # of Reports: 44		Total Releases (tonnes): 2 564.388			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
0280	Dow Chemical Canada Inc.	Western Canada Operations	Fort Saskatchewan	AB	678.800	0.000	0.000	0.000	678.800
1748	NOVA Chemicals Ltd.	Monroe Site	Sarnia	ON	283.088	0.000	0.000	0.000	283.088
0126	AT Plastics Inc.	Edmonton Site	Edmonton	AB	259.000	0.000	0.000	0.000	259.000
2316	Union Carbide Canada Inc.	Prestiss Chemical Manufacturing Plant	Lacombe County	AB	191.830	0.000	0.000	0.000	191.830
3634	Pétromont, société en commandite	Usine de Varennes	Varennes	QC	176.262	0.000	0.000	0.000	176.262
3146	Dow Chemical Canada Inc.	Dow Chemical Canada Inc. - Sarnia	Sarnia	ON	128.737	0.000	0.000	0.000	128.737
1779	NOVA Chemicals Corporation	Joffre Site	Red Deer	AB	126.335	0.000	0.000	0.000	126.335
2234	Synchrude Canada Ltd.	Midland Laka Plant Site	Fort McMurray	AB	112.005	0.000	0.000	0.000	112.005
1776	NOVA Chemicals (Canada) Ltd.	NOVA Chemicals (Canada) Ltd. - Corunna Site	Corunna	ON	70.000	0.000	0.000	0.000	70.000
3835	Pétromont, société en commandite	Usine de Montréal Est	Montréal Est	QC	68.752	0.000	0.000	0.000	68.752

Ethylene glycol		CAS #: 107-21-1		Total # of Reports: 282		Total Releases (tonnes): 3 530.395			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
4451	Canadian Airlines	Pearson Airport Terminal 3	Mississauga	ON	0.000	0.000	0.000	385.500	385.500
1026	Air Canada - Toronto	Toronto International Airport	Toronto	ON	0.000	0.000	0.000	313.451	313.451
2316	Union Carbide Canada Inc.	Prestiss Chemical Manufacturing Plant	Lacombe County	AB	150.284	0.000	0.000	71.480	221.764
4457	Canadian Airlines	Calgary International Airport	Calgary	AB	0.000	0.000	0.000	193.360	193.360
4138	Amoco Canada Petroleum Company	West Whitecourt Plant	N/A	AB	0.000	182.200	0.000	0.000	182.200
4465	Canadian Airlines	Edmonton International Airport	Edmonton	AB	0.000	0.000	0.000	166.128	166.128
1006	Air Canada - Ottawa	Ottawa International Airport	Ottawa	ON	0.000	0.000	0.000	155.046	155.046
1426	Hudson General Aviation Services Inc.		Gloucester	ON	0.000	0.000	0.000	144.173	144.173
1427	Hudson General Aviation Services Inc.		Mississauga	ON	0.000	0.000	0.000	129.032	129.032
3838	Air Canada - St. John's	St. John's International Airport	St. John's	NF	0.000	0.000	0.000	113.802	113.802

Ethylene oxide		CAS #: 75-21-3		Total # of Reports: 8		Total Releases (tonnes): 19,799			
NPRI ID	Company Name	Facility Name	City	Provincial/ Territory	Air	Under- ground	Water	Land	Total Releases
0280	Dow Chemical Canada Inc.	Western Canada Operations	Fort Saskatchewan	AB	4,868	0.325	0.000	0.000	5,193
0484	Chloropak Corp.	Sombra Operations	Sombra	ON	4,290	0.000	0.000	0.000	4,290
2316	Union Carbide Canada Inc.	Prentiss Chemical Manufacturing Plant	Lacombe County	AB	4,037	0.000	0.000	0.000	4,037
1436	Inuvium Corporation Canada Inc.	Guelph Plant	Guelph	ON	2,400	0.000	0.000	0.000	2,400
5644	Griffith Micro Science, Inc.	Toronto Plant	Scarborough	ON	2,270	0.000	0.000	0.000	2,270
3146	Dow Chemical Canada Inc.	Dow Chemical Canada Inc. - Sarnia?	Sarnia	ON	0.000	0.000	0.000	0.000	0.00
0800	Rhodia Canada Inc.	Cooksville Plant	Mississauga	ON	0.652	0.000	0.000	0.000	0.652
Formaldehyde		CAS #: 50-00-0		Total # of Reports: 92		Total Releases (tonnes): 1 448,108			
NPRI ID	Company Name	Facility Name	City	Provincial/ Territory	Air	Under- ground	Water	Land	Total Releases
2636	Abitibi-Consolidated Inc.	Division Port-Alfred	La Baie	QC	0.700	0.000	157,000	0.000	157,700
2760	Weyerhaeuser Canada Ltd.	Drayton Valley O.S.B. Mill	Drayton Valley	AB	157,700	0.000	0.000	0.000	157,700
2762	Weyerhaeuser Canada Ltd.	Edson O.S.B. Mill	Edson	AB	93,120	0.000	0.000	0.000	93,120
2764	Weyerhaeuser Canada Ltd.	Slave Lake O.S.B. Mill	Slave Lake	AB	92,700	0.000	0.000	0.000	92,700
0758	Uniboard Canada Inc.	Division Mont-Laurier	Mont-Laurier	QC	82,800	0.000	0.000	0.000	82,800
4306	Milena Quebec Inc.	Parnaux Malette OSB	Saint-Georges de Champlain	QC	71,900	0.000	0.000	0.000	71,900
4060	Uniboard Canada Inc.	Division Val-d'Or	Val-d'Or	QC	71,200	0.000	0.000	0.000	71,200
5442	Uniboard Canada Inc.	MDF La Baie Inc.	La Baie	QC	68,200	0.000	0.000	0.000	68,200
2989	Uniboard Canada Inc.	Division Sayabec	Sayabec	QC	67,884	0.000	0.000	0.000	67,884
4830	Ranger Board Ltd.		Blue Ridge	AB	63,233	0.000	0.000	0.000	63,233

Hydrazine (and its salts) CAS #: 302-01-2 Total # of Reports: 6 Total Releases (tonnes): 1.985

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
3808	Ontario Power Generation Inc.	Bruce Nuclear Power Development	Kincardine-Bruce-Tiverton	ON	0.047	0.000	0.771	0.000	0.818
3161	Ontario Power Generation Inc.	Pickering Nuclear	Pickering	ON	0.006	0.000	0.594	0.000	0.600
3163	Ontario Power Generation Inc.	Darlington Nuclear Generating Station	Bowmanville	ON	0.038	0.000	0.466	0.000	0.504

Hydrochloric acid CAS #: 7647-01-0 Total # of Reports: 287 Total Releases (tonnes): 11 630.944

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1861	Ontario Power Generation Inc.	Nanticoke Generating Station	Nanticoke	ON	4 233.630	0.000	0.000	0.000	4 233.630
1992	Nova Scotia Power Inc.	Lingan Generating Station	New Waterford	NS	1 657.000	0.000	0.000	0.000	1 657.000
1809	Ontario Power Generation Inc.	Lambton Generating Station	Courtright	ON	1 352.480	0.000	0.000	0.000	1 352.480
2844	Ontario Power Generation Inc.	Lakeview GS	Millsburg	ON	1 106.320	0.000	0.000	0.000	1 106.320
4000	Nova Scotia Power Inc.	Point Aconi Generating Station	Point Aconi	NS	592.000	0.000	0.000	0.000	592.000
2978	Sécal	Usine Vauchreuil	Jongueville	QC	291.300	0.000	0.000	0.000	291.300
0823	Manitoba Hydro	Selkirk Generating Station	St. Clements	MB	277.400	0.000	0.000	0.000	277.400
0821	Manitoba Hydro	Brandon Generating Station	Brandon	MB	211.800	0.000	0.000	0.000	211.800
1944	Bayer Inc.	Bayer Inc. Sarnia Site	Sarnia	ON	189.100	0.000	0.000	0.000	189.100
5728	Royal Polymers Limited	Sarnia PVC Plant	Sarnia	ON	145.602	0.000	0.000	0.000	145.602

Hydrogen cyanide CAS #: 74-90-8 Total # of Reports: 2 Total Releases (tonnes): 2.300

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
2548	Miramar Con Mine Ltd.		Yellowknife	NT	2.300	0.000	0.000	0.000	2.300

Hydrogen fluoride			CAS #: 7664-39-3		Total # of Reports: 53		Total Releases (tonnes): 3 405.246			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
2788	Alcan Smelters and Chemicals Ltd.	Kitimat Works	Kitimat	BC	572.000	0.000	0.000	0.000	572.000	
2284	TransAlta Utilities Corporation	Sundance Thermal Generating Plant	Duffield	AB	380.500	0.000	0.000	0.000	380.500	
3406	Société d'électrolyse et de chimie Alcan	Usine Arvida	Jonquiere	QC	310.750	0.000	0.000	0.000	310.750	
2038	Société Canadienne de Métaux Reynolds Ltée	Aluminerie de Baie-Comeau	Baie-Comeau	QC	309.639	0.000	0.000	0.000	309.639	
1861	Ontario Power Generation Inc.	Nanticoke Generating Station	Nanticoke	ON	205.600	0.000	0.000	0.000	205.600	
2282	TransAlta Utilities Corporation	Wabamun Thermal Generating Plant	Wabamun	AB	191.300	0.000	0.000	0.000	191.300	
1071	Aluminerie de Bécancour Inc.		Ville de Bécancour	QC	174.800	0.000	0.000	0.000	174.800	
2286	TransAlta Utilities Corporation	Keepphills Thermal Generating Plant	Duffield	AB	137.100	0.000	0.000	0.000	137.100	
1036	Sheerness Generating Station		Hanna	AB	113.299	0.000	0.000	0.000	113.299	
4778	Aluminerie Alouette Inc.	Usine de Sept-Iles	Sept-Iles	QC	106.760	0.000	0.000	0.000	106.760	
Isopropyl alcohol			CAS #: 67-63-0		Total # of Reports: 199		Total Releases (tonnes): 2 055.502			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
3893	General Motors of Canada Limited	Oshawa Car Assembly Plant	Oshawa	ON	155.533	0.000	0.000	0.000	155.533	
0358	Glopak Inc.	Usine	Montréal	QC	128.900	0.000	0.000	0.000	128.900	
1516	Intertape Polymer Group	Woven Products Truro Plant	Truro	NS	121.000	0.000	0.000	0.000	121.000	
3609	North American Decorative Products Inc.	Canadian Plant	Brampton	ON	105.276	0.000	0.000	0.000	105.276	
1863	Packall Packaging Inc.		Mississauga	ON	70.000	0.000	0.000	0.000	70.000	
5627	Maple Roll Leaf	Maple Roll Leaf - Windsor	Windsor	ON	51.996	0.000	0.000	0.000	51.996	
4734	Consoltech Inc.		Alexandria	ON	46.961	0.000	0.000	0.000	46.961	
3883	Ford Motor Company	St. Thomas Assembly Plant	St. Thomas	ON	42.054	0.000	0.000	0.000	42.054	
2125	Shell Chemicals Canada Ltd.	Sarnia IPA Plant	Corunna	ON	42.000	0.000	0.000	0.000	42.000	
5435	Polypack Corporation Ltd.		Anjou	QC	40.900	0.000	0.000	0.000	40.900	

Hydrazine (and its salts) CAS #: 302-01-2 Total # of Reports: 6 Total Releases (tonnes): 1.985

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
3808	Ontario Power Generation Inc.	Bruce Nuclear Power Development	Kincardine-Bruce-Tiverton	ON	0.047	0.000	0.771	0.000	0.818
3161	Ontario Power Generation Inc.	Pickering Nuclear	Pickering	ON	0.006	0.000	0.594	0.000	0.600
3163	Ontario Power Generation Inc.	Darlington Nuclear Generating Station	Bowmanville	ON	0.038	0.000	0.466	0.000	0.504

Hydrochloric acid CAS #: 7647-01-0 Total # of Reports: 287 Total Releases (tonnes): 11 630.944

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1861	Ontario Power Generation Inc.	Nanticoke Generating Station	Nanticoke	ON	4 233.630	0.000	0.000	0.000	4 233.630
3992	Nova Scotia Power Inc.	Lingan Generating Station	New Waterford	NS	1 657.000	0.000	0.000	0.000	1 657.000
1809	Ontario Power Generation Inc.	Lambton Generating Station	Courtright	ON	1 352.480	0.000	0.000	0.000	1 352.480
2844	Ontario Power Generation Inc.	Lakeview GS	Mississauga	ON	1 106.320	0.000	0.000	0.000	1 106.320
4000	Nova Scotia Power Inc.	Point Aconi Generating Station	Point Aconi	NS	592.000	0.000	0.000	0.000	592.000
2978	Sécal	Usine Vaudreuil	Jonquière	QC	291.300	0.000	0.000	0.000	291.300
0823	Manitoba Hydro	Selkirk Generating Station	St. Clements	MB	277.400	0.000	0.000	0.000	277.400
0821	Manitoba Hydro	Brandon Generating Station	Brandon	MB	211.800	0.000	0.000	0.000	211.800
1944	Bayer Inc.	Bayer Inc. Sarnia Site	Sarnia	ON	189.100	0.000	0.000	0.000	189.100
5728	Royal Polymers Limited	Sarnia PVC Plant	Sarnia	ON	145.602	0.000	0.000	0.000	145.602

Hydrogen cyanide CAS #: 74-90-8 Total # of Reports: 2 Total Releases (tonnes): 2.300

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
2548	Miramar Con Mine Ltd.		Yellowknife	NT	2.300	0.000	0.000	0.000	2.300

Hydrogen fluoride			CAS #: 7664-39-3		Total # of Reports: 53		Total Releases (tonnes): 3 405.246			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
22788 22284	Alcan Smelters and Chemicals Ltd.	Kitimat Works	Kitimat	BC	572.000	0.000	0.000	0.000	572.000	
	TransAlta Utilities Corporation	Sundance Thermal Generating Plant	Duffield	AB	380.500	0.000	0.000	0.000	380.500	
3406 2038	Société d'électrolyse et de chimie Alcan	Usine Arvida	Jonquiere	QC	310.750	0.000	0.000	0.000	310.750	
	Société Canadienne de Métaux Reynolds Ltée	Aluminerie de Baie-Comeau	Baie-Comeau	QC	309.639	0.000	0.000	0.000	309.639	
1861	Ontario Power Generation Inc.	Nanticoke Generating Station	Nanticoke	ON	205.600	0.000	0.000	0.000	205.600	
22282	TransAlta Utilities Corporation	Wabamun Thermal Generating Plant	Wabamun	AB	191.300	0.000	0.000	0.000	191.300	
1071	Aluminerie de Bécancour Inc.		Ville de Bécancour	QC	174.800	0.000	0.000	0.000	174.800	
22286	TransAlta Utilities Corporation	Keephills Thermal Generating Plant	Duffield	AB	137.100	0.000	0.000	0.000	137.100	
1036	Sheerness Generating Station		Hanna	AB	113.299	0.000	0.000	0.000	113.299	
4778	Aluminerie Alouette Inc.	Usine de Sept-Îles	Sept-Îles	QC	106.760	0.000	0.000	0.000	106.760	
Isopropyl alcohol			CAS #: 67-63-0		Total # of Reports: 199		Total Releases (tonnes): 2 055.502			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
3893	General Motors of Canada Limited	Oshawa Car Assembly Plant	Oshawa	ON	155.533	0.000	0.000	0.000	155.533	
0358	Glopak Inc.	Usine	Montréal	QC	128.900	0.000	0.000	0.000	128.900	
1516	Intertape Polymer Group	Woven Products Truro Plant	Truro	NS	121.000	0.000	0.000	0.000	121.000	
3609	North American Decorative Products Inc.	Canadian Plant	Brampton	ON	105.276	0.000	0.000	0.000	105.276	
1863	Packall Packaging Inc.		Mississauga	ON	70.000	0.000	0.000	0.000	70.000	
5627	Maple Roll Leaf	Maple Roll Leaf - Windsor	Windsor	ON	51.996	0.000	0.000	0.000	51.996	
4734	Consoltext Inc.		Alexandria	ON	46.961	0.000	0.000	0.000	46.961	
3883	Ford Motor Company	St. Thomas Assembly Plant	St. Thomas	ON	42.054	0.000	0.000	0.000	42.054	
2125	Shell Chemicals Canada Ltd.	Sarnia IPA Plant	Corunna	ON	42.000	0.000	0.000	0.000	42.000	
5435	Polypack Corporation Ltd.		Anjou	QC	40.900	0.000	0.000	0.000	40.900	

<i>p,p'</i> -Isopropylidenediphenol		CAS #: 80-05-7		Total # of Reports: 3		Total Releases (tonnes): 1,167		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases
2331	Valspar, Incorporated		West Hill	ON	0.000	0.000	0.000	1,167

Lead (and its compounds)		CAS #: N/A		Total # of Reports: 193		Total Releases (tonnes): 1 628.024		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases
3649	Ispat Sidbec Inc.	Acierie	Contrecoeur	QC	0.840	0.417	294.160	295.417
3623	Noranda Inc.	Fonderie Horne	Rouyn-Noranda	QC	153.230	0.600	0.000	153.830
0444	Inco Limited	Copper Cliff Smelter Complex	Copper Cliff	ON	145.706	0.000	0.000	145.706
5246	Gerdau MRM Steel Inc.	Mandak Metal Processors	Selkirk	MB	0.000	0.000	131.630	131.630
3655	Ispat Sidbec Inc.	Sidbec-Feruni (Ispat) Inc. Contrecoeur	Contrecoeur	QC	0.000	0.006	106.320	106.326
3414	Hudson Bay Mining and Smelting Company Ltd.	HBM&S Co., Ltd. - Metallurgical Complex	Flin Flon	MB	95.985	0.512	0.000	96.497
1651	Gerdau MRM Steel Inc.	MRM Steel	Selkirk	MB	0.895	0.004	93.470	94.369
3824	Co-Steel Lasco		Whitby	ON	1.073	0.041	82.800	83.914
2815	Falconbridge Limited - Kidd Metallurgical Div.	Kidd Metallurgical Site	District of Cochrane	ON	75.585	0.093	0.000	75.678
1106	AltaSteel Ltd.	AltaSteel Ltd.	Edmonton	AB	0.625	0.000	72.139	72.764

Manganese (and its compounds)			CAS #: N/A	Total # of Reports: 316		Total Releases (tonnes): 2 635.424			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
2284	TransAlta Utilities Corporation	Sundance Thermal Generating Plant	Duffield	AB	3.600	0.000	0.000	293.900	297.500
3649	Ispat Sidbec Inc.	Acierie	Contrecoeur	QC	0.000	0.000	0.000	277.930	277.930
3242	Produits forestiers Donohue Inc.	Usine de pâte Kraft, Saint-Felicien	Saint-Felicien	QC	0.000	0.000	70.000	125.000	195.000
1106	AltaSteel Ltd.	AltaSteel Ltd.	Edmonton	AB	3.344	0.000	0.021	189.091	192.456
3824	Co-Steel Lasco		Whitby	ON	0.944	0.000	0.111	180.300	181.355
4000	Nova Scotia Power Inc.	Point Aconi Generating Station	Point Aconi	NS	0.000	0.000	0.000	133.700	133.700
2286	TransAlta Utilities Corporation	Keephills Thermal Generating Plant	Duffield	AB	1.190	0.000	0.000	125.100	126.290
1651	Gerdau MRM Steel Inc.	MRM Steel	Selkirk	MB	3.025	0.000	0.017	113.430	116.472
0606	Esco Limited		Port Coquitlam	BC	0.870	0.000	0.000	96.270	97.140
3855	Lake Erie Steel Company Ltd.		Nanticoke	ON	6.338	0.000	0.552	85.000	91.890

Mercury (and its compounds)			CAS #: N/A	Total # of Reports: 10		Total Releases (tonnes): 1.017			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
3385	Noranda Inc.	Mines Gaspé	Murdochville	QC	0.500	0.000	0.003	0.000	0.503

p,p'-Isopropylidenediphenol		CAS #: 80-05-7	Total # of Reports: 3		Total Releases (tonnes): 1.167		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Total Releases
2331	Valspar, Incorporated		West Hill	ON	0.000	1.167	1.167

Lead (and its compounds)		CAS #: N/A	Total # of Reports: 193		Total Releases (tonnes): 1 628.024		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Total Releases
3649	Ispat Sidbec Inc.	Acierie	Contrecoeur	QC	0.000	0.840	294.160 295.417
3623	Noranda Inc.	Fonderie Horne	Rouyn-Noranda	QC	0.000	153.230	0.000 153.830
0444	Inco Limited	Copper Cliff Smelter Complex	Copper Cliff	ON	0.000	145.706	0.000 145.706
5246	Gerdau MRM Steel Inc.	Mandak Metal Processors	Selkirk	MB	0.000	0.000	131.630 131.630
3655	Ispat Sidbec Inc.	Sidbec-Feruni (Ispat) Inc. Contrecoeur	Contrecoeur	QC	0.000	0.006	106.320 106.326
3414	Hudson Bay Mining and Smelting Company Ltd.	HBM&S Co., Ltd. - Metallurgical Complex	Flin Flon	MB	0.000	95.985	0.512 96.497
1651	Gerdau MRM Steel Inc.	MRM Steel	Selkirk	MB	0.000	0.895	0.004 93.470 94.369
3824	Co-Steel Lusco		Whitby	ON	0.000	1.073	0.041 82.800 83.914
2815	Falconbridge Limited - Kidd Metallurgical Div.	Kidd Metallurgical Site	District of Cochrane	ON	0.000	75.585	0.093 75.678
1106	AltaSteel Ltd.	AltaSteel Ltd.	Edmonton	AB	0.000	0.625	0.000 72.139 72.764

Manganese (and its compounds)			CAS #: N/A	Total # of Reports: 316		Total Releases (tonnes): 2 635.424			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
2284	TransAlta Utilities Corporation	Sundance Thermal Generating Plant	Duffield	AB	3.600	0.000	0.000	293.900	297.500
3549	Ispat Sidsac Inc.	Aciérie	Contrecoeur	QC	0.000	0.000	0.000	277.930	277.930
3242	Produits forestiers Donohue Inc.	Usine de pâte Kraft, Saint-Félicien	Saint-Félicien	QC	0.000	0.000	70.000	125.000	195.000
1106	AltaSteel Ltd.	AltaSteel Ltd.	Edmonton	AB	3.344	0.000	0.021	189.091	192.456
3824	Co-Steel Lasco		Whitby	ON	0.944	0.000	0.111	180.300	181.355
4090	Nova Scotia Power Inc.	Point Aconi Generating Station	Point Aconi	NS	0.000	0.000	0.000	133.700	133.700
2286	TransAlta Utilities Corporation	Keephills Thermal Generating Plant	Duffield	AB	1.190	0.000	0.000	125.100	126.290
1651	Gerdau NRM Steel Inc.	NRM Steel	Saskatoon	MB	3.025	0.000	0.017	113.430	116.472
0606	Esco Limited		Port Coquitlam	BC	0.870	0.000	0.000	96.270	97.140
3855	Lake Erie Steel Company Ltd.		Nanticoke	ON	6.338	0.000	0.552	85.000	91.890

Mercury (and its compounds)			CAS #: N/A	Total # of Reports: 10		Total Releases (tonnes): 1.017			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
3385	Noranda Inc.	Mines Gaspé	Murdochville	QC	0.500	0.000	0.003	0.000	0.503

Methanol		CAS #: 67-56-1		Total # of Reports: 354		Total Releases (tonnes): 19 798.231			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1162	Celanese Canada Inc.	Edmonton Facility	Edmonton	AB	75.200	2 500.000	0.000	0.000	2 575.200
2694	Irving Pulp & Paper, Ltd.) Irving Tissue Company	Irving Pulp & Paper and Irving Tissue Company	Saint John	NB	182.375	0.000	745.610	0.000	927.985
0223	Daishowa-Marubeni Int'l	Peace River Pulp Division	Peace River	AB	726.700	0.000	0.000	0.000	726.700
0930	Bowater Pulp and Paper Canada Inc.	Thunder Bay Operations	Thunder Bay	ON	655.320	0.000	0.000	0.000	655.320
1195	Papiers Domtar - Centre d'affaires Windsor		Windsor	QC	502.400	0.000	61.900	0.000	564.300
0333	Fletcher Challenge Canada	Elk Falls Mill	Campbell River	BC	526.000	0.000	0.000	0.000	526.000
3821	Canadian Fertilizers Limited		Medicine Hat	AB	516.668	0.000	0.000	0.000	516.668
3553	Witco Canada Inc.	West Hill Plant	Scarborough	ON	423.000	0.000	0.000	0.000	423.000
1197	Domtar Papers	Cornwall Business Unit	Cornwall	ON	378.400	0.000	41.410	0.000	419.810
2119	Shell Canada Limited	Jumping Pound Complex	Calgary	AB	0.000	411.000	0.000	0.000	411.000
2-Methoxyethanol		CAS #: 109-86-4		Total # of Reports: 2		Total Releases (tonnes): 16.924			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
4751	Knoll North America Corp.	Main Plant	Toronto	ON	16.924	0.000	0.000	0.000	16.924
Methyl tert-butyl ether		CAS #: 1634-04-4		Total # of Reports: 6		Total Releases (tonnes): 115.046			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
4316	North Atlantic Refining Ltd.	North Atlantic Refinery	Come by Chance	NF	61.549	0.000	0.000	0.000	61.549
2776	Chevron Canada Limited		Burnaby	BC	25.520	0.000	0.000	0.000	25.520
3974	Alberta Envirofuels Inc.		Edmonton	AB	14.936	0.000	0.000	0.003	14.939
4101	Irving Oil Limited	Refining Division	Saint John	NB	9.144	0.000	0.000	0.000	9.144
3698	Imperial Oil	IOL Dartmouth Refinery	Dartmouth	NS	3.713	0.000	0.000	0.000	3.713

Methylenebis(phenylisocyanate)			CAS #: 101-68-8		Total # of Reports: 53		Total Releases (tonnes): 2.761			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land	Total Releases	
0422	Icyene Inc.	Icyene Inc. - Processing Plant	Mississauga	ON	0.000	0.000	0.000	0.000	0.500	
Methyl ethyl ketone			CAS #: 78-93-3		Total # of Reports: 167		Total Releases (tonnes): 4 936.273			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land	Total Releases	
3475	Canadian General - Tower Ltd.		Cambridge	ON	688.959	0.000	0.000	0.000	688.959	
0741	Morbern Incorporated		Cornwall	ON	606.000	0.000	0.000	0.000	606.000	
2263	Imperial Home Decor Group (Canada) ULC		Brampton	ON	463.980	0.000	0.000	0.000	463.980	
3759	International Wallcoverings Ltd.	Brampton Plant	Brampton	ON	454.000	0.000	0.000	0.000	454.000	
11162	Celanese Canada Inc.	Edmonton Facility	Edmonton	AB	42.600	386.000	0.000	0.000	428.600	
5627	Maple Roll Leaf	Maple Roll Leaf - Windsor	Windsor	ON	331.429	0.000	0.000	0.000	331.429	
4210	Velcro Canada Inc.		Brampton	ON	201.334	0.000	0.000	0.000	201.334	
2656	Ventra Plastics	Peterborough Plant	Peterborough	ON	127.230	0.000	0.000	0.000	127.230	
4173	Chrysler Canada, Ltd.	Bramalea Assembly Plant	Brampton	ON	98.597	0.000	0.000	0.000	98.597	
1674	Navistar International Corp. Canada	Chatham Assembly Plant	Chatham	ON	74.807	0.000	0.000	0.000	74.807	
Methyl isobutyl ketone			CAS #: 108-10-1		Total # of Reports: 73		Total Releases (tonnes): 645.572			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land	Total Releases	
3704	Imperial Oil	IOL Sarnia Refinery	Sarnia	ON	72.660	0.000	0.000	0.000	72.660	
3759	International Wallcoverings Ltd.	Brampton Plant	Brampton	ON	69.000	0.000	0.000	0.000	69.000	
3883	Ford Motor Company	St. Thomas Assembly Plant	St. Thomas	ON	66.670	0.000	0.000	0.000	66.670	
3883	General Motors of Canada Limited	Oshawa Car Assembly Plant	Oshawa	ON	47.485	0.000	0.000	0.000	47.485	
3870	General Motors of Canada Limited	Oshawa Truck Assembly Centre	Oshawa	ON	43.091	0.000	0.000	0.000	43.091	
4849	Tanzien Components Corporation	Paint Facility	Concord	ON	42.981	0.000	0.000	0.000	42.981	
3790	Toyota Motor Manufacturing Canada Inc.		Cambridge	ON	38.250	0.000	0.000	0.000	38.250	
3419	Ford Motor Company	Oakville Assembly Plant	Oakville	ON	38.186	0.000	0.000	0.000	38.186	
3213	Crown Cork & Seal Canada Inc.	Crown Cork & Seal Canada Inc. - Pkt 233	Concord	ON	31.875	0.000	0.000	0.000	31.875	
5627	Maple Roll Leaf	Maple Roll Leaf - Windsor	Windsor	ON	30.560	0.000	0.000	0.000	30.560	

Methanol		CAS #: 67-56-1	Total # of Reports: 354		Total Releases (tonnes): 19 798.231			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land
1162	Celanese Canada Inc.	Edmonton Facility	Edmonton	AB	75.200	2 500.000	0.000	0.000
2604	Irving Pulp & Paper, Ltd. Irving Tissue Company	Irving Pulp & Paper and Irving Tissue Company	Saint John	NB	182.375	0.000	745.610	0.000
0223	Daishowa-Marubeni Int'l	Peace River Pulp Division	Peace River	AB	726.700	0.000	0.000	0.000
0930	Bowater Pulp and Paper Canada Inc.	Thunder Bay Operations	Thunder Bay	ON	655.320	0.000	0.000	0.000
1195	Papiers Domtar - Centre d'affaires Windsor		Windsor	QC	502.400	0.000	61.900	0.000
0333	Fletcher Challenge Canada	Elk Falls Mill	Campbell River	BC	526.000	0.000	0.000	0.000
3821	Canadian Fertilizers Limited	Medicine Hat	Medicine Hat	AB	516.668	0.000	0.000	0.000
3553	Witco Canada Inc.	West Hill Plant	Scarborough	ON	423.000	0.000	0.000	0.000
1197	Domtar Papers	Cornwall Business Unit	Cornwall	ON	378.400	0.000	41.410	0.000
2119	Shell Canada Limited	Jumping Pound Complex	Calgary	AB	0.000	411.000	0.000	0.000
2-Methoxyethanol		CAS #: 109-86-4	Total # of Reports: 2		Total Releases (tonnes): 16.924			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land
4751	Knoll North America Corp.	Main Plant	Toronto	ON	16.924	0.000	0.000	0.000
Methyl tert-butyl ether		CAS #: 1634-04-4	Total # of Reports: 6		Total Releases (tonnes): 115.046			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land
4316	North Atlantic Refining Ltd.	North Atlantic Refinery	Come by Chance	NF	61.549	0.000	0.000	0.000
2776	Chevron Canada Limited		Burnaby	BC	25.520	0.000	0.000	0.000
3974	Alberta Envirofuels Inc.		Edmonton	AB	14.936	0.000	0.000	0.003
4101	Irving Oil Limited	Refining Division	Saint John	NB	9.144	0.000	0.000	0.000
3698	Imperial Oil	IOL Dartmouth Refinery	Dartmouth	NS	3.713	0.000	0.000	0.000

Methylenebis(phenylisocyanate)		CAS #: 101-68-8		Total # of Reports: 53		Total Releases (tonnes): 2.761			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land	Total Releases
0422	Icynene Inc.	Icynene Inc. - Processing Plant	Mississauga	ON	0.000	0.000	0.000	0.000	0.500
Methyl ethyl ketone		CAS #: 78-93-3		Total # of Reports: 167		Total Releases (tonnes): 4 936.273			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land	Total Releases
3475	Canadian General - Tower Ltd.		Cambridge	ON	0.000	688.959	0.000	0.000	688.959
0741	Morbern Incorporated		Cornwall	ON	0.000	606.000	0.000	0.000	606.000
2263	Imperial Home Decor Group (Canada) ULC		Brampton	ON	0.000	463.980	0.000	0.000	463.980
3759	International Wallcoverings Ltd.	Brampton Plant	Brampton	ON	0.000	454.000	0.000	0.000	454.000
1162	Celanese Canada Inc.	Edmonton Facility	Edmonton	AB	386.000	42.600	0.000	0.000	428.600
5627	Maple Roll Leaf	Maple Roll Leaf - Windsor	Windsor	ON	0.000	331.429	0.000	0.000	331.429
4210	Velcro Canada Inc.		Brampton	ON	0.000	201.334	0.000	0.000	201.334
2656	Ventra Plastics	Peterborough Plant	Peterborough	ON	0.000	127.230	0.000	0.000	127.230
4173	Chrysler Canada, Ltd.	Bramalea Assembly Plant	Brampton	ON	0.000	98.597	0.000	0.000	98.597
1674	Navistar International Corp. Canada	Chatham Assembly Plant	Chatham	ON	0.000	74.807	0.000	0.000	74.807
Methyl isobutyl ketone		CAS #: 108-10-1		Total # of Reports: 73		Total Releases (tonnes): 645.572			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land	Total Releases
3704	Imperial Oil	IOL Sarnia Refinery	Sarnia	ON	0.000	72.660	0.000	0.000	72.660
3759	International Wallcoverings Ltd.	Brampton Plant	Brampton	ON	0.000	69.000	0.000	0.000	69.000
3883	Ford Motor Company	St. Thomas Assembly Plant	St. Thomas	ON	0.000	66.670	0.000	0.000	66.670
3893	General Motors of Canada Limited	Oshawa Car Assembly Plant	Oshawa	ON	0.000	47.485	0.000	0.000	47.485
3870	General Motors of Canada Limited	Oshawa Truck Assembly Centre	Oshawa	ON	0.000	43.091	0.000	0.000	43.091
4849	Taxien Components Corporation	Paint Facility	Concord	ON	0.000	42.981	0.000	0.000	42.981
3790	Toyota Motor Manufacturing Canada Inc.		Cambridge	ON	0.000	38.250	0.000	0.000	38.250
3419	Ford Motor Company	Oakville Assembly Plant	Oakville	ON	0.000	38.186	0.000	0.000	38.186
3213	Crown Cork & Seal Canada Inc.	Crown Cork & Seal Canada Inc. - Plt 233	Concord	ON	0.000	31.875	0.000	0.000	31.875
5627	Maple Roll Leaf	Maple Roll Leaf - Windsor	Windsor	ON	0.000	30.560	0.000	0.000	30.560

Methyl methacrylate		CAS #: 80-62-6	Total # of Reports: 15		Total Releases (tonnes): 17.432		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Total Releases
3847	CYRO Canada Inc.		Niagara Falls	ON	0.000	0.000	12.261
5605	Unicell Ltd.		Toronto	ON	0.000	0.000	2.620
0361	Graham Products Ltd.		Inglewood	ON	0.000	0.000	1.350

Molybdenum trioxide		CAS #: 1313-27-5	Total # of Reports: 17		Total Releases (tonnes): 2.817		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Total Releases
4650	Catalyst Recovery Canada Ltd.	CRCL - Medicine Hat	Medicine Hat	AB	0.000	0.000	1.531
3158	Atlas Steels Inc.	Atlas Specialty Steels	Welland	ON	0.000	0.242	0.721

Naphthalene		CAS #: 91-20-3	Total # of Reports: 49		Total Releases (tonnes): 87.923		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Total Releases
4993	TrentonWorks Ltd.	TrentonWorks	Trenton	NS	0.000	0.000	28.990
2070	VFT Inc.		Hamilton	ON	0.000	0.000	10.014
3713	Dofasco Inc.		Hamilton	ON	0.000	0.000	9.150
2984	Stelco Inc.	Hilton Works	Hamilton	ON	0.000	0.100	4.510
0787	Napierville Refineries Inc.	Napierville	Napierville	QC	0.000	0.000	3.700
3704	Imperial Oil	IOL Sarnia Refinery	Sarnia	ON	0.000	0.046	2.813
1070	Algoma Steel Inc	Algoma Steel Main Works	Sault Ste. Marie	ON	0.000	0.052	2.682
3899	Petro-Canada	Mississauga Lubricant Center	Mississauga	ON	0.000	0.000	2.399
3962	Shell Canada Products Limited	Sarnia Manufacturing Centre	Corunna	ON	0.000	0.000	2.263
3701	Imperial Oil	IOL Nanticoke Refinery	Nanticoke	ON	0.000	0.011	1.943

Nickel (and its compounds)			CAS #: N/A		Total # of Reports: 201			Total Releases (tonnes): 696.740					
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under-ground	Water	Land	Air	Under-ground	Water	Land	Air	Total Releases
1467	Inco Limited	Copper Cliff Nickel Refinery	Copper Cliff	ON	130.102	0.000	0.000	0.000	130.102	0.000	0.000	0.000	130.102
1473	Inco Limited	Manitoba Division	Thompson	MB	92.072	0.000	12.284	0.000	92.072	0.000	0.000	0.000	104.356
0444	Inco Limited	Copper Cliff Smelter Complex	Copper Cliff	ON	67.800	0.000	0.000	0.000	67.800	0.000	0.000	0.000	67.800
1465	Inco Limited	Central Mills	Copper Cliff	ON	0.000	0.000	35.459	0.000	0.000	35.459	0.000	0.000	35.459
1696	New Brunswick Power	Coleson Cove Generating Station	Saint John	NB	6.550	0.000	0.037	0.000	6.550	0.000	0.037	0.000	34.577
2284	TransAlta Utilities Corporation	Sundance Thermal Generating Plant	Duffield	AB	0.420	0.000	0.000	0.000	0.420	0.000	0.000	0.000	34.120
1861	Ontario Power Generation Inc.	Nanticoke Generating Station	Nanticoke	ON	1.640	0.000	0.080	0.000	1.640	0.000	0.080	0.000	29.180
4882	Newfoundland and Labrador Hydro	Holyrood Thermal Generating Station	Holyrood	NF	24.700	0.000	0.004	0.000	24.700	0.000	0.004	0.000	27.604
1809	Ontario Power Generation Inc.	Lambton Generating Station	Courtright	ON	0.230	0.000	0.010	0.000	0.230	0.000	0.010	0.000	26.180
1471	Inco Limited	Inco Limited Port Colborne Refinery	Port Colborne	ON	0.599	0.000	0.456	0.000	0.599	0.000	0.456	0.000	24.365
Nitrate ion (in solution at pH ≥ 6.0)			CAS #: N/A		Total # of Reports: 82			Total Releases (tonnes): 4 212.388					
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under-ground	Water	Land	Air	Under-ground	Water	Land	Air	Total Releases
2749	City of Medicine Hat	Wastewater Treatment Plant	Medicine Hat	AB	0.000	0.000	476.650	0.000	0.000	476.650	23.180	0.000	499.830
0420	ICI Canada Inc.	McMasterville Complex	McMasterville	QC	0.000	0.000	399.000	0.000	0.000	399.000	0.000	0.000	399.000
3953	Aciers Atlas Inc.	Aciers Inoxydables Atlas	Tracy	QC	0.000	0.000	373.000	0.000	0.000	373.000	0.000	0.000	373.000
4743	City of London	Greenway Pollution Control Centre	London	ON	0.000	0.000	322.818	0.000	0.000	322.818	0.000	0.000	322.818
2377	Western Pulp Limited Partnership	Port Alice Cellulose Operation	Port Alice	BC	0.000	0.000	270.000	0.000	0.000	270.000	0.000	0.000	270.000
2134	Agrium Products Inc.	Redwater Fertilizer Operations	Redwater/Municipal District of Sturgeon	AB	6.750	145.730	96.530	0.000	145.730	96.530	10.530	0.000	259.540
3704	Imperial Oil	IOL Sarnia Refinery	Sarnia	ON	0.000	0.000	234.110	0.000	0.000	234.110	0.000	0.000	234.110
3353	McCain Foods (Canada)	Grand Falls Plants	Grand Falls	NB	0.000	0.000	211.535	0.000	0.000	211.535	0.000	0.000	211.535
3840	Parmalat Canada	Winchester	Winchester	ON	0.000	0.000	196.100	0.000	0.000	196.100	0.000	0.000	196.100
0770	Regional Municipality of Ottawa-Carleton	Robert O. Pickard Environmental Centre	Gloucester	ON	0.000	0.000	188.000	0.000	0.000	188.000	0.000	0.000	188.000

Methyl methacrylate		CAS #: 80-62-6		Total # of Reports: 15		Total Releases (tonnes): 17.432		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases
3847	CYRO Canada Inc.		Niagara Falls	ON	12.231	0.000	0.030	12.261
5605	Unicell Ltd.		Toronto	ON	2.620	0.000	0.000	2.620
0361	Graham Products Ltd.		Inglewood	ON	1.350	0.000	0.000	1.350

Molybdenum trioxide		CAS #: 1313-27-5		Total # of Reports: 17		Total Releases (tonnes): 2.817		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases
4650	Catalyst Recovery Canada Ltd.	CRCL - Medicine Hat	Medicine Hat	AB	1.531	0.000	0.000	1.531
3158	Atlas Steels Inc.	Atlas Specialty Steels	Welland	ON	0.479	0.000	0.242	0.721

Naphthalene		CAS #: 91-20-3		Total # of Reports: 49		Total Releases (tonnes): 87.923		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases
4993	TrentonWorks Ltd.	TrentonWorks	Trenton	NS	28.990	0.000	0.000	28.990
2670	VFT Inc.		Hamilton	ON	10.014	0.000	0.000	10.014
3713	Dofasco Inc.		Hamilton	ON	9.150	0.000	0.000	9.150
2984	Stelco Inc.	Hilton Works	Hamilton	ON	4.410	0.000	0.100	4.510
0787	Napierville Refineries Inc.	Napierville	Napierville	QC	3.700	0.000	0.000	3.700
3704	Imperial Oil	IOL Sarnia Refinery	Sarnia	ON	2.767	0.000	0.046	2.813
1070	Algoma Steel Inc	Algoma Steel Main Works	Sault Ste. Marie	ON	2.630	0.000	0.052	2.682
3899	Petro-Canada	Mississauga Lubricant Center	Mississauga	ON	2.399	0.000	0.000	2.399
3962	Shell Canada Products Limited	Sarnia Manufacturing Centre	Corunna	ON	2.228	0.000	0.000	2.263
3701	Imperial Oil	IOL Nanticoke Refinery	Nanticoke	ON	1.932	0.000	0.011	1.943

Nickel (and its compounds)			CAS #: N/A		Total # of Reports: 201		Total Releases (tonnes): 696.740			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
1467	Inco Limited	Copper Cliff Nickel Refinery	Copper Cliff	ON	130.102	0.000	0.000	0.000	130.102	
1473	Inco Limited	Manitoba Division	Thompson	MB	92.072	0.000	12.284	0.000	104.356	
0444	Inco Limited	Copper Cliff Smelter Complex	Copper Cliff	ON	67.800	0.000	0.000	0.000	67.800	
1465	Inco Limited	Central Mills	Copper Cliff	ON	0.000	0.000	35.459	0.000	35.459	
1696	New Brunswick Power	Coleson Cove Generating Station	Saint John	NB	6.550	0.000	0.037	27.990	34.577	
2284	TransAlta Utilities Corporation	Sundance Thermal Generating Plant	Duffield	AB	0.420	0.000	0.000	33.700	34.120	
1861	Ontario Power Generation Inc.	Nanticoke Generating Station	Nanticoke	ON	1.640	0.000	0.080	27.460	29.180	
4882	Newfoundland and Labrador Hydro	Holyrood Thermal Generating Station	Holyrood	NF	24.700	0.000	0.004	2.900	27.604	
1809	Ontario Power Generation Inc.	Lambton Generating Station	Courtright	ON	0.230	0.000	0.010	25.940	26.180	
1471	Inco Limited	Inco Limited Port Colborne Refinery	Port Colborne	ON	0.599	0.000	0.456	23.310	24.365	
Nitrate ion (in solution at pH ≥ 6.0)					Total # of Reports: 82		Total Releases (tonnes): 4 212.388			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
2749	City of Medicine Hat	Wastewater Treatment Plant	Medicine Hat	AB	0.000	0.000	476.650	23.180	499.830	
0420	ICI Canada Inc.	McMasterville Complex	McMasterville	QC	0.000	0.000	399.000	0.000	399.000	
3953	Aciars Atlas Inc.	Aciars Inoxydables Atlas	Tracy	QC	0.000	0.000	373.000	0.000	373.000	
4743	City of London	Greenway Pollution Control Centre	London	ON	0.000	0.000	322.818	0.000	322.818	
2377	Western Pulp Limited Partnership	Port Alice Cellulose Operation	Port Alice	BC	0.000	0.000	270.000	0.000	270.000	
2134	Agrium Products Inc.	Redwater Fertilizer Operations	Redwater/Municipal District of Sturgeon	AB	6.750	145.730	96.530	10.530	259.540	
3704	Imperial Oil	IOL Sarnia Refinery	Sarnia	ON	0.000	0.000	234.110	0.000	234.110	
3353	McCain Foods (Canada)	Grand Falls Plants	Grand Falls	NB	0.000	0.000	211.535	0.000	211.535	
3840	ParmaLat Canada	Winchester	Winchester	ON	0.000	0.000	196.100	0.000	196.100	
0770	Regional Municipality of Ottawa-Carleton	Robert O. Pickard Environmental Centre	Gloucester	ON	0.000	0.000	188.000	0.000	188.000	

CAS #: 7697-37-2										Total # of Reports: 92			Total Releases (tonnes): 11,616		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases						
3850	Decor Products International		Midland	ON	2,800	0.000	0.000	0.000	2,800						
2515	Simplot Canada Limited		Brandon	MB	2,500	0.000	0.000	0.000	2,500						
0225	Daymond Aluminum		Chatham	ON	1,885	0.000	0.000	0.000	1,885						
0322	Produits Chimiques Expro Inc.		Valleyfield	QC	0.000	0.000	0.989	0.000	0.989						
3125	Viasystems Canada Inc.	Kirkland	Kirkland	QC	0.774	0.000	0.000	0.000	0.774						

CAS #: 139-13-9										Total # of Reports: 10			Total Releases (tonnes): 1,795		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases						
3658	Lever Pond's - a Division of UL Canada Inc.		Toronto	ON	1,700	0.000	0.000	0.000	1,700						

CAS #: 108-95-2										Total # of Reports: 66			Total Releases (tonnes): 263,307		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases						
4378	Formica Canada Inc.		Saint-Jean-sur-Richelieu	QC	82,000	0.000	0.000	0.000	82,000						
1797	Northwood Inc.	Northwood Pulp Mill	Prince George	BC	0.000	0.000	22,400	0.000	22,400						
3201	3M Canada Company (Perth)	Perth, Ontario	Perth	ON	21,180	0.000	0.000	0.000	21,180						
5406	Cartons St-Laurent Inc.	Cartons St-Laurent Inc. Usine de Matane	Matane	QC	20,160	0.000	0.000	0.000	20,160						
5687	Roxul, Inc.	Milton Plant	Milton	ON	17,200	0.000	0.000	0.000	17,200						
1882	Fibrex Insulations Inc.		Sarnia	ON	12,377	0.000	0.000	0.000	12,377						
0011	Borden Chemical Canada Ltd.	Borden Chemical - Edmonton	Edmonton	AB	11,409	0.000	0.000	0.000	11,409						
2760	Weyerhaeuser Canada Ltd.	Drayton Valley O.S.B. Mill	Drayton Valley	AB	8,270	0.000	0.000	0.000	8,270						
2363	Longlac Wood Industries Inc.		Longlac	ON	7,831	0.000	0.000	0.000	7,831						
0953	Alcatel Canada Wire	Simcoe Plant	Simcoe	ON	7,202	0.000	0.000	0.000	7,202						

Phosphoric acid CAS #: 7664-38-2 Total # of Reports: 223 Total Releases (tonnes): 27.695

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land	Total Releases
4533	Can Mar Manufacturing Ltd. Inc.		Niagara Falls	ON	0.000	15.000	0.000	0.000	15.000
0979	Abitibi-Consolidated Inc.	Division Kénogami	Jonquière	QC	0.000	0.000	3.200	0.000	3.200
3121	A.G. Simpson Co. Ltd.	A.G. Simpson Co. Ltd. - Cambridge	Cambridge	ON	0.000	2.046	0.000	0.000	2.046
3127	Produits Shell Canada Limitée	Raffinerie de Montréal Est	Montréal Est	QC	0.000	1.600	0.000	0.000	1.600
2134	Agrium Products Inc.	Redwater Fertilizer Operations	Redwater/Municipal District of Sturgeon	AB	0.000	0.000	0.000	1.160	1.160
3850	Decor Products International		Midland	ON	0.000	1.000	0.000	0.000	1.000
3476	DaimlerChrysler AG	Windsor Assembly Plant	Windsor	ON	0.000	0.999	0.000	0.000	0.999

Phosphorus (yellow or white) CAS #: 7723-14-0 Total # of Reports: 23 Total Releases (tonnes): 27.293

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land	Total Releases
5449	Les Services Safety-Kleen (Mercier) Ltée		Mercier	QC	0.000	11.327	0.000	0.000	11.327
3394	Irving Paper		Saint John	NB	0.000	0.000	10.972	0.000	10.972
4790	FF. Soucy Inc.		Rivière-du-Loup	QC	0.000	0.000	4.700	0.000	4.700

Phthalic anhydride CAS #: 85-44-9 Total # of Reports: 16 Total Releases (tonnes): 1.129

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land	Total Releases
0120	Ashland Canada Inc.	Resin & Chemical Div.	Mississauga	ON	0.000	0.000	0.000	0.000	0.555

Nitric acid		CAS #: 7697-37-2	Total # of Reports: 92	Total Releases (tonnes): 11,616			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land
3850	Decor Products International		Midland	ON	0.000	0.000	0.000
2515	Simplot Canada Limited		Brandon	MB	0.000	0.000	0.000
0225	Daymond Aluminum		Chatham	ON	0.000	0.000	0.000
0322	Produits Chimiques Espro Inc.		Valleyfield	QC	0.000	0.989	0.000
3125	Viasystems Canada Inc.	Kirkland	Kirkland	QC	0.000	0.000	0.000
Nitrilotriacetic acid (and its salts)		CAS #: 139-13-9	Total # of Reports: 10	Total Releases (tonnes): 1.795			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land
3658	Lever Pond's - a Division of UL Canada Inc.		Toronto	ON	0.000	0.000	0.000
Phenol (and its salts)		CAS #: 108-95-2	Total # of Reports: 66	Total Releases (tonnes): 263.307			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land
4378	Formica Canada Inc.		Saint-Jean-sur-Richelieu	QC	0.000	0.000	0.000
1797	Northwood Inc.	Northwood Pulp Mill	Prince George	BC	0.000	22.400	0.000
3201	3M Canada Company (Perth)	Perth, Ontario	Perth	ON	0.000	0.000	0.000
5406	Cartons St-Laurent Inc.	Cartons St-Laurent Inc. Usine de Matane	Matane	QC	0.000	0.000	0.000
5687	Roxul, Inc.	Milton Plant	Milton	ON	0.000	0.000	0.000
1882	Fibrex Insulations Inc.		Sarnia	ON	0.000	0.000	0.000
0011	Borden Chemical Canada Ltd.	Borden Chemical - Edmonton	Edmonton	AB	0.000	0.000	0.000
2760	Weyerhaeuser Canada Ltd.	Drayton Valley O.S.B. Mill	Drayton Valley	AB	0.000	0.000	0.000
2363	Longlac Wood Industries Inc.		Longlac	ON	0.000	0.000	0.000
0953	Alcatel Canada Wire	Simcoe Plant	Simcoe	ON	0.000	0.000	0.000

CAS #: 7664-38-2										Total # of Reports: 223			Total Releases (tonnes): 27.695			
Phosphoric acid		Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases						
NPRI ID																
4533	Can Mar Manufacturing Ltd. Inc.		Niagara Falls	ON	15.000	0.000	0.000	0.000	0.000	15.000						
0979	Abitibi-Consolidated Inc.	Division Kénogami	Jonquière	QC	0.000	0.000	3.200	0.000	0.000	3.200						
3121	A.G. Simpson Co. Ltd.	A.G. Simpson Co. Ltd. - Cambridge	Cambridge	ON	2.046	0.000	0.000	0.000	0.000	2.046						
3127	Produits Shell Canada Limitée	Raffinerie de Montréal Est	Montréal Est	QC	1.600	0.000	0.000	0.000	0.000	1.600						
2134	Agrium Products Inc.	Redwater Fertilizer Operations	Redwater/Municipal District of Sturgeon	AB	0.000	0.000	0.000	0.000	1.160	1.160						
3850	Decor Products International		Midland	ON	1.000	0.000	0.000	0.000	0.000	1.000						
3476	DaimlerChrysler AG	Windsor Assembly Plant	Windsor	ON	0.999	0.000	0.000	0.000	0.000	0.999						
CAS #: 7723-14-0										Total # of Reports: 23			Total Releases (tonnes): 27.293			
Phosphorus (yellow or white)		Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases						
NPRI ID																
5449	Les Services Safety-Kleen (Mercier) Ltée		Mercier	QC	11.327	0.000	0.000	0.000	0.000	11.327						
3394	Irving Paper		Saint John	NB	0.000	0.000	10.972	0.000	0.000	10.972						
4790	FF. Soucy Inc.		Rivière-du-Loup	QC	0.000	0.000	4.700	0.000	0.000	4.700						
CAS #: 85-44-9										Total # of Reports: 16			Total Releases (tonnes): 1.129			
Phthalic anhydride		Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases						
NPRI ID																
0120	Ashland Canada Inc.	Resin & Chemical Div.	Mississauga	ON	0.000	0.000	0.000	0.000	0.000	0.555						

Propylene		CAS #: 115-07-1		Total # of Reports: 38		Total Releases (tonnes): 951.300			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
3634	Petromont, société en commandite	Usine de Varennes	Varennes	QC	225.187	0.000	0.000	0.000	225.187
4763	Montell Canada Inc.	Sarnia Plant	Corunna	ON	123.000	0.000	0.000	0.000	123.000
2274	Syncrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	79.667	0.000	0.000	0.000	79.667
2125	Shell Chemicals Canada Ltd.	Sarnia IPA Plant	Corunna	ON	45.200	0.000	0.000	0.000	45.200
3901	Petro-Canada	Oakville Refinery	Oakville	ON	43.790	0.000	0.000	0.000	43.790
1776	NOVA Chemicals (Canada) Ltd.	NOVA Chemicals (Canada) Ltd. - Corunna Site	Corunna	ON	42.380	0.000	0.000	0.000	42.380
3704	Imperial Oil	IOL Sarnia Refinery	Sarnia	ON	38.602	0.000	0.000	0.000	38.602
3701	Imperial Oil	IOL Nanticoke Refinery	Nanticoke	ON	37.222	0.000	0.000	0.000	37.222
3928	Ultramar Ltée	Raffinerie Saint-Romuald	Saint-Romuald	QC	35.282	0.000	0.000	0.000	35.282
3962	Shell Canada Products Limited	Sarnia Manufacturing Centre	Corunna	ON	28.835	0.000	0.000	0.000	28.835

Propylene oxide		CAS #: 75-56-9		Total # of Reports: 5		Total Releases (tonnes): 14.182			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
3146	Dow Chemical Canada Inc.	Dow Chemical Canada Inc. - Sarnia	Sarnia	ON	7.456	0.000	0.000	0.000	7.456
0800	Rhodia Canada Inc.	Cooksville Plant	Mississauga	ON	5.986	0.000	0.000	0.000	5.986
1436	Huntsman Corporation Canada Inc.	Guelph Plant	Guelph	ON	0.600	0.000	0.000	0.000	0.600

Selenium (and its compounds)		CAS #: N/A		Total # of Reports: 13		Total Releases (tonnes): 19.976			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1861	Ontario Power Generation Inc.	Nanticoke Generating Station	Nanticoke	ON	4.400	0.000	0.040	4.930	9.370
3623	Noranda Inc.	Fonderie Horne	Rouyn-Noranda	QC	4.140	0.000	0.549	0.000	4.689
2815	Falconbridge Limited - Kidd Metallurgical Div.	Kidd Metallurgical Site	District of Cochrane	ON	0.664	0.000	3.188	0.000	3.852
1469	Inco Limited	Copper Refinery	Copper Cliff	ON	1.341	0.000	0.000	0.000	1.341

Silver (and its compounds)			CAS #: N/A		Total # of Reports: 16		Total Releases (tonnes): 2.315			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land	Releases	Total
3623	Noranda Inc.	Fonderie Horne	Rouyn-Noranda	QC	0.000	1.270	0.126	0.000	1.396	
Styrene										
			CAS #: 100-42-5		Total # of Reports: 92		Total Releases (tonnes): 1 083.246			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land	Releases	Total
4916	MAAX Inc.	Fibre de Verre Moderne - usine 5	Tring-Jonction	QC	0.000	115.740	0.000	0.000	115.740	
3573	Mirolin Industries	Mirolin	Toronto	ON	0.000	101.450	0.000	0.000	101.450	
4981	Rene Materiaux Composites Ltée	Usine Saint-Éphrem	Saint-Éphrem-de-Beauce	QC	0.000	53.000	0.000	0.000	53.000	
2561	Camoplast Inc.	Division Roxton Falls	Roxton Falls	QC	0.000	52.000	0.000	0.000	52.000	
4323	MAAX Inc.	Acrylica	Sainte-Marie	QC	0.000	49.754	0.000	0.000	49.754	
2031	Reinforced Plastic Systems Inc.	Mahone Bay Plant	Mahone Bay	NS	0.000	49.500	0.000	0.000	49.500	
1659	Frank Fair Industries Ltd.		Winnipeg	MB	0.000	47.091	0.000	0.000	47.091	
5262	ZCL Composites Inc.	Edmonton	Edmonton	AB	0.000	44.980	0.000	0.000	44.980	
4996	ADS Groupe Composites/ div Beauce Composites		Sainte-Clotilde-de-Beauce	QC	0.000	43.368	0.000	0.000	43.368	
5445	Granirex Inc.	Thetford Plant	Thetford Mines	QC	0.000	40.000	0.000	0.000	40.000	
Sulphuric acid										
			CAS #: 7664-93-9		Total # of Reports: 435		Total Releases (tonnes): 14 797.886			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land	Releases	Total
0444	Inco Limited	Copper Cliff Smelter Complex	Copper Cliff	ON	0.000	2 796.000	0.000	0.000	2 796.000	
1036	Sheerness Generating Station		Hanna	AB	0.000	1 743.655	0.000	0.000	1 743.655	
4876	Avenor Maritimes Inc.	Dalhousie Mill	Dalhousie	NB	0.000	1 642.000	0.100	0.000	1 642.100	
2274	Syncrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	0.000	935.800	0.000	0.000	935.800	
1696	New Brunswick Power	Coleson Cove Generating Station	Saint John	NB	0.000	903.900	0.000	0.000	903.900	
1033	Alberta Power Limited	Battle River Generating Station	Forestburg	AB	0.000	641.417	0.000	0.000	641.417	
2119	Shell Canada Limited	Jumping Pound Complex	Calgary	AB	0.000	569.000	0.000	0.000	569.000	
1712	New Brunswick Power	Dalhousie Generating Station	Dalhousie	NB	0.000	544.100	0.000	0.000	544.100	
2230	Suncor Energy Inc.	Suncor Energy Inc. Oil Sands	Fort McMurray	AB	0.000	456.340	0.000	0.000	456.340	
1861	Ontario Power Generation Inc.	Nanticoke Generating Station	Nanticoke	ON	0.000	399.030	0.000	0.000	399.030	

Propylene		CAS #: 115-07-1		Total # of Reports: 38		Total Releases (tonnes): 951.300			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
3634	Pétromont, société en commandite	Usine de Varennes	Varennes	QC	225.187	0.000	0.000	0.000	225.187
4763	Montell Canada Inc.	Sarnia Plant	Corunna	ON	123.000	0.000	0.000	0.000	123.000
2274	Synchrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	79.667	0.000	0.000	0.000	79.667
2125	Shell Chemicals Canada Ltd.	Sarnia IPA Plant	Corunna	ON	45.200	0.000	0.000	0.000	45.200
3901	Petro-Canada	Oakville Refinery	Oakville	ON	43.790	0.000	0.000	0.000	43.790
1776	NOVA Chemicals (Canada) Ltd.	NOVA Chemicals (Canada) Ltd. - Corunna Site	Corunna	ON	42.380	0.000	0.000	0.000	42.380
3704	Imperial Oil	IOL Sarnia Refinery	Sarnia	ON	38.602	0.000	0.000	0.000	38.602
3701	Imperial Oil	IOL Nanticoke Refinery	Nanticoke	ON	37.222	0.000	0.000	0.000	37.222
3928	Ultramar Ltée	Raffinerie Saint-Romuald	Saint-Romuald	QC	35.282	0.000	0.000	0.000	35.282
3962	Shell Canada Products Limited	Sarnia Manufacturing Centre	Corunna	ON	28.835	0.000	0.000	0.000	28.835
Propylene oxide		CAS #: 75-56-9		Total # of Reports: 5		Total Releases (tonnes): 14.182			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
3146	Dow Chemical Canada Inc.	Dow Chemical Canada Inc. - Sarnia	Sarnia	ON	7.456	0.000	0.000	0.000	7.456
0800	Rhodia Canada Inc.	Cookville Plant	Mississauga	ON	5.986	0.000	0.000	0.000	5.986
1436	Huntsman Corporation Canada Inc.	Guelph Plant	Guelph	ON	0.600	0.000	0.000	0.000	0.600
Selenium (and its compounds)		CAS #: N/A		Total # of Reports: 13		Total Releases (tonnes): 19.976			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
1861	Ontario Power Generation Inc.	Nanticoke Generating Station	Nanticoke	ON	4.400	0.000	0.040	4.930	9.370
3623	Noranda Inc.	Fonderie Horne	Rouyn-Noranda	QC	4.140	0.000	0.549	0.000	4.689
2815	Falconbridge Limited - Kidd Metallurgical Div.	Kidd Metallurgical Site	District of Cochrane	ON	0.664	0.000	3.188	0.000	3.852
1468	Inco Limited	Copper Refinery	Copper Cliff	ON	1.341	0.000	0.000	0.000	1.341

Silver (and its compounds) CAS #: N/A Total # of Reports: 16 Total Releases (tonnes): 2.315

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases
3623	Noranda Inc.	Fonderie Horne	Rouyn-Noranda	QC	0.000	0.126	0.000	1.396

Styrene CAS #: 100-42-5 Total # of Reports: 92 Total Releases (tonnes): 1 083.246

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases
4916	MAAX Inc.	Fibre de Verre Moderne - usine 5	Tring-Jonction	QC	0.000	0.000	0.000	115.740
3573	Mirolin Industries	Mirolin	Toronto	ON	0.000	0.000	0.000	101.450
4981	Rene Materiaux Composites Ltée	Usine Saint-Ephrem	Saint-Ephrem-de-Beauce	QC	0.000	0.000	0.000	53.000
2561	Camoplast Inc.	Division Roxton Falls	Roxton Falls	QC	0.000	0.000	0.000	52.000
4323	MAAX Inc.	Acrylica	Sainte-Marie	QC	0.000	0.000	0.000	49.754
2031	Reinforced Plastic Systems Inc.	Mahone Bay Plant	Mahone Bay	NS	0.000	0.000	0.000	49.500
1659	Frank Fair Industries Ltd.		Winnipeg	MB	0.000	0.000	0.000	47.091
5262	ZCL Composites Inc.	Edmonton	Edmonton	AB	0.000	0.000	0.000	44.980
4996	ADS Groupe Composites/ div Beauce Composites		Sainte-Clotilde-de-Beauce	QC	0.000	0.000	0.000	43.368
5445	Granitex Inc.	Thetford Plant	Thetford Mines	QC	0.000	0.000	0.000	40.000

Sulphuric acid CAS #: 7664-93-9 Total # of Reports: 435 Total Releases (tonnes): 14 797.886

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases
0444	Inco Limited	Copper Cliff Smelter Complex	Copper Cliff	ON	2 796.000	0.000	0.000	2 796.000
1036	Sheerness Generating Station		Hanna	AB	1 743.655	0.000	0.000	1 743.655
4876	Avenor Maritimes Inc.	Dalhousie Mill	Dalhousie	NB	1 642.000	0.100	0.000	1 642.100
2274	Synovude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	935.800	0.000	0.000	935.800
1696	New Brunswick Power	Coleson Cove Generating Station	Saint John	NB	903.900	0.000	0.000	903.900
1033	Alberta Power Limited	Battle River Generating Station	Forestburg	AB	641.417	0.000	0.000	641.417
2119	Shell Canada Limited	Jumping Pound Complex	Calgary	AB	569.000	0.000	0.000	569.000
1712	New Brunswick Power	Dalhousie Generating Station	Dalhousie	NB	544.100	0.000	0.000	544.100
2230	Suncor Energy Inc.	Suncor Energy Inc. Oil Sands	Fort McMurray	AB	456.340	0.000	0.000	456.340
1861	Ontario Power Generation Inc.	Nanticoke Generating Station	Nanticoke	ON	399.030	0.000	0.000	399.030

1,1,2,2-Tetrachloroethane CAS #: 79-34-5 Total # of Reports: 2 Total Releases (tonnes): 1,566

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land	Total Releases
0280	Dow Chemical Canada Inc.	Western Canada Operations	Fort Saskatchewan	AB	0.000	1,566	0.000	0.000	1,566

Tetrachloroethylene CAS #: 127-18-4 Total # of Reports: 41 Total Releases (tonnes): 126,106

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land	Total Releases
4864	Uniglove Services Ltd.		Hamilton	ON	0.000	82,440	0.000	0.000	82,440
2852	ICI Canada Inc.	ICI Explosifs, Brownsburg	Brownsburg	QC	0.000	10,600	0.000	0.000	10,600
4718	Industrial Glove & Garment Ltd.	Cleaning Plant	Whitby	ON	0.000	8,200	0.000	0.000	8,200
5627	Maple Roll Leaf	Maple Roll Leaf - Windsor	Windsor	ON	0.000	6,825	0.000	0.000	6,825
4899	Deluxe Toronto		Toronto	ON	0.000	5,126	0.000	0.000	5,126
4471	Aries Flexographics Limited		Mississauga	ON	0.000	3,930	0.000	0.000	3,930
1447	IBM Canada Ltée	IBM Canada Ltée, Bromont	Bromont	QC	0.000	3,890	0.000	0.000	3,890
1553	CCL Industries Inc.	KG Packaging	Concord	ON	0.000	3,000	0.000	0.000	3,000
1260	Fielding Chemical Technologies Inc.	Anachemia Solvents Ltd. Division	Mississauga	ON	0.000	0.555	0.000	0.000	0.555
3962	Shell Canada Products Limited	Sarnia Manufacturing Centre	Corunna	ON	0.000	0.000	0.000	0.000	0.503

Toluene CAS #: 108-88-3 Total # of Reports: 340 Total Releases (tonnes): 6 550,520

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Air	Water	Land	Total Releases
2263	Imperial Home Decor Group (Canada) ULC		Brampton	ON	0.000	357,640	0.000	0.000	357,640
3893	General Motors of Canada Limited	Oshawa Car Assembly Plant	Oshawa	ON	0.000	299,098	0.000	0.000	299,098
3447	Québecor Printing Canada	Québecor Printing PE&E	Etobicoke	ON	0.000	290,232	3,328	0.000	293,560
4399	Canadian Technical Tape	Montréal Plant	Saint-Laurent	QC	0.000	290,800	0.000	0.000	290,800
3759	International Wallcoverings Ltd.	Brampton Plant	Brampton	ON	0.000	232,700	0.000	0.000	232,700
5627	Maple Roll Leaf	Maple Roll Leaf - Windsor	Windsor	ON	0.000	227,174	0.000	0.000	227,174
3475	Canadian General - Tower Ltd.		Cambridge	ON	0.000	197,977	0.000	0.000	197,977
4734	Consoltech Inc.		Alexandria	ON	0.000	181,544	0.000	0.000	181,544
0741	Morbern Incorporated		Cornwall	ON	0.000	181,500	0.000	0.000	181,500
3989	Jacobs & Thompson Inc.		Weston	ON	0.000	168,353	0.000	0.000	168,353

1,1,2-Trichloroethane			CAS #: 79-00-5		Total # of Reports: 3		Total Releases (tonnes): 1,394			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
00280	Dow Chemical Canada Inc.	Western Canada Operations	Fort Saskatchewan	AB	1,018	0,000	0,000	0,000	1,018	
Trichloroethylene										
CAS #: 79-01-6			Total # of Reports: 46		Total Releases (tonnes): 344,492					
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
4524	Sandvik Steel Canada		Arnprior	ON	269,623	0,000	0,000	0,000	269,623	
1189	Bombardier Aerospace	Downsview Plant	Downsview	ON	86,900	0,000	0,000	0,000	86,900	
3845	Blount Canada Ltd.		Guelph	ON	58,846	0,000	0,000	0,000	58,846	
2396	Wolverine Tube (Canada) Inc.	Wolverine Tube (Canada) Inc. London Operations	London	ON	58,815	0,000	0,000	0,000	58,815	
0818	CANUSA, a Division of Shaw Industries, Ltd.	Huntsville	Huntsville	ON	49,707	0,000	0,000	0,000	49,707	
3143	Derlan Aerospace Canada	Cambridge Division	Cambridge	ON	33,000	0,000	0,000	0,000	33,000	
0123	Associated Tube Industries	A.T.I.	Markham	ON	30,100	0,000	0,000	0,000	30,100	
4990	Fleet Industries Ltd.		Fort Erie	ON	29,300	0,000	0,000	0,000	29,300	
0135	Bonar Inc.	Plastics Division	Burlington/Halton	ON	27,700	0,000	0,000	0,000	27,700	
4448	ITL Industrial Tires		Mississauga	ON	27,670	0,000	0,000	0,000	27,670	

1,1,2,2-Tetrachloroethane			CAS #: 79-34-5		Total # of Reports: 2		Total Releases (tonnes): 1,566		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases	
0280	Dow Chemical Canada Inc.	Western Canada Operations	Fort Saskatchewan	AB	1,566	0,000	0,000	1,566	

Tetrachloroethylene			CAS #: 127-18-4		Total # of Reports: 41		Total Releases (tonnes): 126,106		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases	
4864	Uniglove Services Ltd.		Hamilton	ON	82,440	0,000	0,000	82,440	
2852	ICI Canada Inc.	ICI Explosifs, Brownsburg	Brownsburg	QC	10,600	0,000	0,000	10,600	
4718	Industrial Glove & Garment Ltd.	Cleaning Plant	Whitby	ON	8,200	0,000	0,000	8,200	
5627	Maple Roll Leaf	Maple Roll Leaf - Windsor	Windsor	ON	6,825	0,000	0,000	6,825	
4899	Deluxe Toronto		Toronto	ON	5,126	0,000	0,000	5,126	
4471	Aries Flexographics Limited		Mississauga	ON	3,930	0,000	0,000	3,930	
1447	IBM Canada Ltée	IBM Canada Ltée, Bromont	Bromont	QC	3,890	0,000	0,000	3,890	
1553	CCL Industries Inc.	KG Packaging	Concord	ON	3,000	0,000	0,000	3,000	
1260	Fielding Chemical Technologies Inc.	Anachemia Solvents Ltd. Division	Mississauga	ON	0,555	0,000	0,000	0,555	
3962	Shell Canada Products Limited	Sarnia Manufacturing Centre	Corunna	ON	0,000	0,000	0,000	0,503	

Toluene			CAS #: 108-88-3		Total # of Reports: 340		Total Releases (tonnes): 6 550,520		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases	
2263	Imperial Home Decor Group (Canada) ULC		Brampton	ON	357,640	0,000	0,000	357,640	
3893	General Motors of Canada Limited	Oshawa Car Assembly Plant	Oshawa	ON	299,098	0,000	0,000	299,098	
3447	Quebecor Printing Canada	Quebecor Printing PE&E	Etobicoke	ON	290,232	0,000	3,328	293,560	
4399	Canadian Technical Tape	Montréal Plant	Saint-Laurent	QC	290,800	0,000	0,000	290,800	
3759	International Wallcoverings Ltd.	Brampton Plant	Brampton	ON	232,700	0,000	0,000	232,700	
5627	Maple Roll Leaf	Maple Roll Leaf - Windsor	Windsor	ON	227,174	0,000	0,000	227,174	
3475	Canadian General - Tower Ltd.		Cambridge	ON	197,977	0,000	0,000	197,977	
4734	Consoltech Inc.		Alexandria	ON	181,544	0,000	0,000	181,544	
0741	Morbern Incorporated		Cornwall	ON	181,500	0,000	0,000	181,500	
3989	Jacobs & Thompson Inc.		Weston	ON	168,353	0,000	0,000	168,353	

1,1,2-Trichloroethane		CAS #: 79-00-5	Total # of Reports: 3		Total Releases (tonnes): 1,394			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land
0280	Dow Chemical Canada Inc.	Western Canada Operations	Fort Saskatchewan	AB	1,018	0,000	0,000	0,000
Total Releases					1,018	0,000	0,000	1,018

Trichloroethylene		CAS #: 79-01-6	Total # of Reports: 46		Total Releases (tonnes): 844,492			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land
4524	Sandvik Steel Canada		Arnprior	ON	269,623	0,000	0,000	0,000
1189	Bombardier Aerospace	Downsview Plant	Downsview	ON	86,900	0,000	0,000	0,000
3845	Blount Canada Ltd.		Guelph	ON	58,846	0,000	0,000	0,000
2396	Wolverine Tube (Canada) Inc.	Wolverine Tube (Canada) Inc. London Operations	London	ON	58,815	0,000	0,000	0,000
0818	CANUSA, a Division of Shaw Industries, Ltd.	Huntsville	Huntsville	ON	49,707	0,000	0,000	0,000
3143	Derlan Aerospace Canada	Cambridge Division	Cambridge	ON	33,000	0,000	0,000	0,000
0123	Associated Tube Industries	A.T.I.	Markham	ON	30,100	0,000	0,000	0,000
4990	Fleet Industries Ltd.		Fort Erie	ON	29,300	0,000	0,000	0,000
0135	Bonar Inc.	Plastics Division	Burlington/Halton	ON	27,700	0,000	0,000	0,000
0448	ITL Industrial Tires		Mississauga	ON	27,670	0,000	0,000	0,000
Total Releases					844,492	0,000	0,000	0,000

1,2,4-Trimethylbenzene**CAS #: 95-63-6****Total # of Reports: 103****Total Releases (tonnes): 625.027**

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases
3419	Ford Motor Company	Oakville Assembly Plant	Oakville	ON	0.000	0.000	0.000	94.470
3893	General Motors of Canada Limited	Oshawa Car Assembly Plant	Oshawa	ON	0.000	0.000	0.000	66.846
2274	Synchrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	0.000	0.000	0.000	59.306
3478	DaimlerChrysler	Pillette Road Truck Assembly Plant	Windsor	ON	0.000	0.000	0.000	34.414
0733	Paintplas Inc.	650 Finley Ave.	Ajax	ON	0.000	0.000	0.000	31.400
2230	Suncor Energy Inc.	Suncor Energy Inc. Oil Sands	Fort McMurray	AB	0.000	0.000	0.000	30.103
4907	Budd Canada Inc.	Budd Canada Kitchen	Kitchener	ON	0.000	0.000	0.000	26.671
3883	Ford Motor Company	St. Thomas Assembly Plant	St. Thomas	ON	0.000	0.000	0.000	25.151
1492	Elf Atochem Canada		Bécancour	QC	0.000	0.042	0.000	23.187
5703	Weatherstrong Building Products		Smiths Falls	ON	0.000	0.000	0.000	18.926

Vanadium (fume or dust)**CAS #: 7440-62-2****Total # of Reports: 20****Total Releases (tonnes): 167.947**

NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases
3704	Imperial Oil	IOL Sarnia Refinery	Sarnia	ON	0.000	0.000	0.966	62.028
4316	North Atlantic Refining Ltd.	North Atlantic Refinery	Come by Chance	NF	0.000	0.000	0.000	61.917
3962	Shell Canada Products Limited	Sarnia Manufacturing Centre	Corunna	ON	0.000	0.000	0.149	15.095
3897	Petro-Canada	Raffinerie de Montréal	Montréal	QC	0.000	0.000	0.000	10.569
4101	Irving Oil Limited	Refining Division	Saint John	NB	0.000	0.000	0.000	7.324
3127	Produits Shell Canada Limitée	Raffinerie de Montréal Est	Montréal Est	QC	0.000	0.000	0.000	5.870
2230	Suncor Energy Inc.	Suncor Energy Inc. Oil Sands	Fort McMurray	AB	0.000	0.000	0.000	3.460

Vinyl acetate																
CAS #: 108-05-4					Total # of Reports: 10				Total Releases (tonnes): 297.106							
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases							
11162	Celanese Canada Inc.	Edmonton Facility	Edmonton	AB	42.414	160.000	0.000	0.000	202.414							
0126	AT Plastics Inc.	Edmonton Site	Edmonton	AB	87.100	0.000	0.000	0.605	87.705							
3586	Nacan Products Limited	Produits Nacan Limitee	Boucherville	QC	3.080	0.000	0.000	0.000	3.080							
11165	Celanese Canada Inc.	Weston Terminal	North York	ON	1.500	0.000	0.000	0.000	1.500							
13114	Benjamin Moore & Co. Limited	Benjamin Moore & Co. Limited, Montréal Plant	Montréal	QC	1.071	0.000	0.000	0.000	1.071							
0374	Halitech Inc.	Scarborough	Scarborough	ON	0.846	0.000	0.000	0.000	0.846							
Vinyl chloride																
CAS #: 75-01-4					Total # of Reports: 9				Total Releases (tonnes): 26.001							
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases							
5728	Royal Polymers Limited	Sarnia PVC Plant	Sarnia	ON	8.614	0.000	0.000	0.000	8.614							
0355	Geon Canada Inc.	Scotford Plant	Fort Saskatchewan	AB	7.770	0.000	0.005	0.000	7.775							
1300	Geon Canada Inc.	Niagara Plant	Thorold	ON	6.187	0.000	0.004	0.000	6.191							
0280	Dow Chemical Canada Inc.	Western Canada Operations	Fort Saskatchewan	AB	2.796	0.000	0.000	0.000	2.796							
Xylene (mixed isomers)																
CAS #: 1330-20-7					Total # of Reports: 328				Total Releases (tonnes): 7 019.210							
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases							
3893	General Motors of Canada Limited	Oshawa Car Assembly Plant	Oshawa	ON	570.781	0.000	0.000	0.000	570.781							
4796	Les Aciers Canam	Saint-Gédéon	Saint-Gédéon	QC	341.600	0.000	0.000	0.000	341.600							
0733	Paintplas Inc.	650 Finley Ave.	Ajax	ON	332.300	0.000	0.000	0.000	332.300							
2274	Synchrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	315.836	0.000	0.000	0.000	315.836							
3883	Ford Motor Company	St. Thomas Assembly Plant	St. Thomas	ON	226.300	0.000	0.000	0.000	226.300							
1215	Ford Motor Company	Ontario Truck	Oakville	ON	221.130	0.000	0.000	0.000	221.130							
2230	Suncor Energy Inc.	Suncor Energy Inc. Oil Sands	Fort McMurray	AB	204.890	0.000	0.000	0.000	204.890							
3478	DaimlerChrysler	Pillette Road Truck Assembly Plant	Windsor	ON	200.727	0.000	0.000	0.000	200.727							
3419	Ford Motor Company	Oakville Assembly Plant	Oakville	ON	192.990	0.000	0.000	0.000	192.990							
946	Canam Steel Works	Calgary	Calgary	AB	184.400	0.000	0.000	0.000	184.400							

1,2,4-Trimethylbenzene		CAS #: 95-63-6	Total # of Reports: 103		Total Releases (tonnes): 625.027			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases
3419	Ford Motor Company	Oakville Assembly Plant	Oakville	ON	94.470	0.000	0.000	94.470
3893	General Motors of Canada Limited	Oshawa Car Assembly Plant	Oshawa	ON	56.846	0.000	0.000	56.846
2274	Syncrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	59.306	0.000	0.000	59.306
3478	DaimlerChrysler	Pillette Road Truck Assembly Plant	Windsor	ON	34.414	0.000	0.000	34.414
0733	Paintplas Inc.	650 Finley Ave.	Ajax	ON	31.400	0.000	0.000	31.400
2230	Suncor Energy Inc.	Suncor Energy Inc. Oil Sands	Fort McMurray	AB	30.103	0.000	0.000	30.103
4907	Budd Canada Inc.	Budd Canada Kitchener	Kitchener	ON	26.671	0.000	0.000	26.671
3883	Ford Motor Company	St. Thomas Assembly Plant	St. Thomas	ON	25.151	0.000	0.000	25.151
1492	Elf Atochem Canada		Bécancour	QC	23.145	0.000	0.042	23.187
5703	Weatherstrong Building Products		Smiths Falls	ON	18.926	0.000	0.000	18.926
Total # of Reports: 20					Total Releases (tonnes): 167.947			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Under- ground	Water	Land	Total Releases
3704	Imperial Oil	IOL Sarnia Refinery	Sarnia	ON	61.062	0.000	0.966	62.028
4316	North Atlantic Refining Ltd.	North Atlantic Refinery	Come by Chance	NF	61.917	0.000	0.000	61.917
3962	Shell Canada Products Limited	Sarnia Manufacturing Centre	Corunna	ON	14.946	0.000	0.149	15.095
3897	Petro-Canada	Raffinerie de Montréal	Montréal	QC	10.569	0.000	0.000	10.569
4101	Irving Oil Limited	Refining Division	Saint John	NB	7.324	0.000	0.000	7.324
3127	Produits Shell Canada Limitée	Raffinerie de Montréal Est	Montréal Est	QC	5.870	0.000	0.000	5.870
2230	Suncor Energy Inc.	Suncor Energy Inc. Oil Sands	Fort McMurray	AB	3.460	0.000	0.000	3.460

Vinyl acetate										CAS #: 108-05-4			Total # of Reports: 10			Total Releases (tonnes): 297.106		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases									
11162	Celanese Canada Inc.	Edmonton Facility	Edmonton	AB	42.414	160.000	0.000	0.000	202.414									
010126	AT Plastics Inc.	Edmonton Site	Edmonton	AB	87.100	0.000	0.000	0.605	87.705									
33586	Nacan Products Limited	Produits Nacan Limitee	Boucherville	QC	3.080	0.000	0.000	0.000	3.080									
11165	Celanese Canada Inc.	Weston Terminal	North York	ON	1.500	0.000	0.000	0.000	1.500									
313114	Benjamin Moore & Co. Limited	Benjamin Moore & Co. Limited, Montréal Plant	Montréal	QC	1.071	0.000	0.000	0.000	1.071									
03374	Halitech Inc.		Scarborough	ON	0.846	0.000	0.000	0.000	0.846									
Vinyl chloride										CAS #: 75-01-4			Total # of Reports: 9			Total Releases (tonnes): 26.001		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases									
5728	Royal Polymers Limited	Sarnia PVC Plant	Sarnia	ON	8.614	0.000	0.000	0.000	8.614									
0355	Geon Canada Inc.	Scotford Plant	Fort Saskatchewan	AB	7.770	0.000	0.005	0.000	7.775									
1300	Geon Canada Inc.	Niagara Plant	Thorold	ON	6.187	0.000	0.004	0.000	6.191									
0280	Dow Chemical Canada Inc.	Western Canada Operations	Fort Saskatchewan	AB	2.796	0.000	0.000	0.000	2.796									
Xylene (mixed isomers)										CAS #: 1330-20-7			Total # of Reports: 328			Total Releases (tonnes): 7 019.210		
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases									
3893	General Motors of Canada Limited	Oshawa Car Assembly Plant	Oshawa	ON	570.781	0.000	0.000	0.000	570.781									
4796	Les Aciers Canam	Saint-Gédéon	Saint-Gédéon	QC	341.600	0.000	0.000	0.000	341.600									
0733	Paintplas Inc.	650 Finley Ave.	Ajax	ON	332.300	0.000	0.000	0.000	332.300									
2274	Synchrude Canada Ltd.	Mildred Lake Plant Site	Fort McMurray	AB	315.836	0.000	0.000	0.000	315.836									
3883	Ford Motor Company	St. Thomas Assembly Plant	St. Thomas	ON	226.300	0.000	0.000	0.000	226.300									
1215	Ford Motor Company	Ontario Truck	Oakville	ON	221.130	0.000	0.000	0.000	221.130									
2230	Suncor Energy Inc.	Suncor Energy Inc. Oil Sands	Fort McMurray	AB	204.890	0.000	0.000	0.000	204.890									
3478	DaimlerChrysler	Pillette Road Truck Assembly Plant	Windsor	ON	200.727	0.000	0.000	0.000	200.727									
3419	Ford Motor Company	Oakville Assembly Plant	Oakville	ON	192.990	0.000	0.000	0.000	192.990									
4946	Canam Steel Works	Calgary	Calgary	AB	184.400	0.000	0.000	0.000	184.400									

m-Xylene		CAS #: 108-38-3		Total # of Reports: 7		Total Releases (tonnes): 26.092			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
4732	Canac Richchems Limited		Thornhill	ON	16.163	0.000	0.000	0.000	16.163
3928	Ultramar Ltée	Raffinerie Saint-Romuald	Saint-Romuald	QC	6.605	0.000	0.000	0.000	6.605
2128	Shell Canada Ltd.	Peace River Complex	Peace River	AB	0.000	1.750	0.000	0.000	1.750
4316	North Atlantic Refining Ltd.	North Atlantic Refinery	Come by Chance	NF	1.474	0.000	0.000	0.000	1.474
Total Releases (tonnes): 26.092									
o-Xylene		CAS #: 95-47-6		Total # of Reports: 9		Total Releases (tonnes): 18.171			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
0921	Bartek Ingredients Inc.	Plant 2	Stoney Creek	ON	10.000	0.000	0.000	0.000	10.000
4316	North Atlantic Refining Ltd.	North Atlantic Refinery	Come by Chance	NF	3.590	0.000	0.032	0.000	3.622
3928	Ultramar Ltée	Raffinerie Saint-Romuald	Saint-Romuald	QC	2.686	0.000	0.000	0.000	2.686
2128	Shell Canada Ltd.	Peace River Complex	Peace River	AB	0.000	1.531	0.000	0.000	1.531
Total Releases (tonnes): 18.171									
p-Xylene		CAS #: 106-42-3		Total # of Reports: 9		Total Releases (tonnes): 43.083			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
4569	Petroles Coastal Canada Inc.	Petrochimie Coastal du Canada	Montréal Est	QC	39.069	0.000	0.000	0.000	39.069
3928	Ultramar Ltée	Raffinerie Saint-Romuald	Saint-Romuald	QC	2.014	0.000	0.000	0.000	2.014
2128	Shell Canada Ltd.	Peace River Complex	Peace River	AB	0.000	1.750	0.000	0.000	1.750

Zinc (and its compounds)			CAS #: N/A		Total # of Reports: 387		Total Releases (tonnes): 6 927.306			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases	
3649	Ispat Sidbec Inc.	Aciérie	Contrecoeur	QC	7.800	0.000	0.750	2 698.160	2 706.710	
1651	Gerdau MRM Steel Inc.	MRM Steel	Selkirk	MB	8.615	0.000	0.026	929.950	938.591	
3824	Co-Steel Lasco		Whitby	ON	11.797	0.000	0.068	858.000	869.865	
1106	AltaSteel Ltd.	AltaSteel Ltd.	Edmonton	AB	4.930	0.000	0.022	377.540	382.492	
5246	Gerdau MRM Steel Inc.	Mandak Metal Processors	Selkirk	MB	0.000	0.000	0.000	373.924	373.924	
4204	Sydney Steel Corporation	Sydney Steel	Sydney	NS	0.000	0.000	0.400	330.000	330.400	
3655	Ispat Sidbec Inc.	Sidbec-Feruni (Ispat) Inc. Contrecoeur	Contrecoeur	QC	0.000	0.000	0.002	203.430	203.432	
3802	Cominco Ltd.	Trail Operations	Trail	BC	139.400	0.000	54.400	0.000	193.800	
3414	Hudson Bay Mining and Smelting Company Ltd.	HBM&S Co., Ltd. - Metallurgical Complex	Flin Flon	MB	172.544	0.000	3.577	0.000	176.121	
2938	Noranda Inc. CEZinc	Usine d'extraction de zinc	Salaberry-de- Valleyfield	QC	86.546	0.000	3.823	0.000	90.369	

CAS #: 108-38-3									
m-Xylene									
Total # of Reports: 7									
Total Releases (tonnes): 26.092									
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
4732	Canac Kitchens Limited		Thornhill	ON	16.163	0.000	0.000	0.000	16.163
3928	Ultramar Ltée	Raffinerie Saint-Romuald	Saint-Romuald	QC	6.605	0.000	0.000	0.000	6.605
2128	Shell Canada Ltd.	Peace River Complex	Peace River	AB	0.000	1.750	0.000	0.000	1.750
4316	North Atlantic Refining Ltd.	North Atlantic Refinery	Come by Chance	NF	1.474	0.000	0.000	0.000	1.474
CAS #: 95-47-6									
o-Xylene									
Total # of Reports: 9									
Total Releases (tonnes): 18.171									
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
0921	Bartek Ingredients Inc.	Plant 2	Stoney Creek	ON	10.000	0.000	0.000	0.000	10.000
4316	North Atlantic Refining Ltd.	North Atlantic Refinery	Come by Chance	NF	3.590	0.000	0.032	0.000	3.622
3928	Ultramar Ltée	Raffinerie Saint-Romuald	Saint-Romuald	QC	2.686	0.000	0.000	0.000	2.686
2128	Shell Canada Ltd.	Peace River Complex	Peace River	AB	0.000	1.531	0.000	0.000	1.531
CAS #: 106-42-3									
p-Xylene									
Total # of Reports: 9									
Total Releases (tonnes): 43.083									
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
4569	Petroles Coastal Canada Inc.	Petrochimie Coastal du Canada	Montreal Est	QC	39.069	0.000	0.000	0.000	39.069
3928	Ultramar Ltée	Raffinerie Saint-Romuald	Saint-Romuald	QC	2.014	0.000	0.000	0.000	2.014
2128	Shell Canada Ltd.	Peace River Complex	Peace River	AB	0.000	1.750	0.000	0.000	1.750

Zinc (and its compounds)		CAS #: N/A		Total # of Reports: 387		Total Releases (tonnes): 6 927.306			
NPRI ID	Company Name	Facility Name	City	Province/ Territory	Air	Under- ground	Water	Land	Total Releases
3649	Ispat Sidbec Inc.	Acierie	Contrecoeur	QC	7.800	0.000	0.750	2 698.160	2 706.710
1651	Gerdau MRM Steel Inc.	MRM Steel	Selkirk	MB	8.615	0.000	0.026	929.950	938.591
3824	Co-Steel Lasco		Whitby	ON	11.797	0.000	0.068	858.000	869.865
1106	AltaSteel Ltd.	AltaSteel Ltd.	Edmonton	AB	4.930	0.000	0.022	377.540	382.492
5246	Gerdau MRM Steel Inc.	Mandak Metal Processors	Selkirk	MB	0.000	0.000	0.000	373.924	373.924
4204	Sydney Steel Corporation	Sydney Steel	Sydney	NS	0.000	0.000	0.400	330.000	330.400
3655	Ispat Sidbec Inc.	Sidbec-Feruni (Ispat) Inc. Contrecoeur	Contrecoeur	QC	0.000	0.000	0.002	203.430	203.432
3802	Cominco Ltd.	Trail Operations	Trail	BC	139.400	0.000	54.400	0.000	193.800
3414	Hudson Bay Mining and Smelting Company Ltd.	HBM&S Co., Ltd. Metallurgical Complex	Flin Flon	MB	172.544	0.000	3.577	0.000	176.121
2938	Noranda Inc. CEZinc	Usine d'extraction de zinc	Salaberry-de- Valleyfield	QC	86.546	0.000	3.823	0.000	90.369



Appendix 3 - Information Summaries on NPRI Pollutants Reported in the Largest Quantities

Effects of chemicals on human health and the environment depend on a number of factors, including length and frequency of exposure, amount and toxicity of chemical, local climate and environmental conditions, sensitivity and proximity of people. The profiles provided below summarize environmental and health information for NPRI pollutants released on site or transferred off site in the largest quantities in 1998.

Five NPRI Pollutants Released On Site in the Largest Quantities - 1998

1. Ammonia (total)

Total ammonia is the sum of ammonia and the ammonium ion in solution. Ammonia is a colourless gas with a suffocating odour. It is alkaline, caustic and a powerful irritant. Under pressure, ammonia is a colourless liquid.

Little information is available on exposure of the general Canadian population to ammonia in the environment. However, acute toxic effects of ammonia, such as that which may occur in occupational scenarios, include swelling of the larynx, possibly leading to death, laryngitis, severe eye and pulmonary edema, wheezing, gastrointestinal irritation, nausea, vomiting, diarrhea, abdominal pain, chest pain, convulsions and coma (NSC, 1997). The liquified gas may also cause frostbite and corrosive injury to skin and eyes (CCOHS, 1999). Chronic exposure may result in increased susceptibility to viral illness and aggravation of chronic respiratory conditions (HC, 1998).

Ammonia is considered very toxic to aquatic organisms (ISIC, 1993).

Ammonia has a wide range of uses, including the production of fertilizers, plastics, fibres, chemicals, rubber, leather, explosives, water treatment, pharmaceuticals and metals. Ammonia is also used as a refrigerant, cleaner and a detergent (CCOHS, 1999).

2. Methanol

Methanol is a clear, white liquid. It has a pungent odour at room temperature. Methanol is also called methyl alcohol, wood alcohol and carbinol (ISIC, 1993).

There is little information on environmental exposure of the general Canadian population to methanol. Nonetheless, effects reported following occupational or accidental exposure include visual disturbances, permanent blindness, damage to the nervous system, nausea, vomiting, cardiac depression, liver damage, and eye, nose, mouth, throat and skin irritation, and with exposure at high levels, death (NSC, 1997).

Methanol evaporates into the air, breaks down into other chemicals, and can contribute to smog formation. Methanol can react in the air to produce formaldehyde, a carcinogen. Methanol can dissolve completely in water, and can be washed out in rain. Methanol does not bind well to soil, and can evaporate from soil into the air. Methanol can be broken down by microorganisms or enter groundwater (EPA, 1988). Methanol is of low toxicity to aquatic and terrestrial organisms (ISIC, 1993).

Methanol is used as a solvent in adhesives, inks, resins and pharmaceuticals. It is also used in pesticides, pharmaceuticals, paint strippers, antifreeze, gasoline, and cleaners. It can be released from a number of sources, including: pulp mills, chemical and plastic manufacturing plants, during extraction of crude petroleum and natural gas, from transportation sources, volcanoes and during biological decomposition of wastes, sludges and sewage (EPA, 1998).

3. Sulphuric Acid

Sulphuric acid is a clear, colourless, oily and odourless liquid. It is soluble in water, and can be found in the air as small droplets or attached to small particles (NSC, 1998).

Environmental exposure of the general Canadian population to sulphuric acid has not been assessed. Accidental and occupational exposure to sulphuric acid has been associated with pulmonary edema, bronchitis, emphysema, conjunctivitis, dermatitis, general irritation of the nose and throat, and effects on the gastrointestinal system, with particularly severe reactions reported among persons with asthma (EPA, 1989; NSC, 1998).

Sulphuric acid has a wide range of uses, including the manufacture of fertilizers, pigments, fibres, chemicals, explosives, detergents, drugs, plastics and pulp and paper. It is used in petroleum refining, the pickling of iron and steel and other metals, leaching of ores, as a catalyst and as a lab reagent (EPA, 1989), (CCOHS, 1998).

Sulphuric acid has moderate acute and chronic toxicity to aquatic life (EPA, 1989).

4. Hydrochloric Acid

Hydrochloric acid can be either a colourless liquid or a colourless or slightly yellow gas. Fumes from hydrochloric acid have an acidic, penetrating odour.

There is no information on exposure of the general Canadian population to hydrochloric acid in the environment. However, effects observed following occupational or accidental exposure include irritation of the eyes, nose and throat, ulceration of the respiratory tract, laryngitis, tracheitis, bronchitis, pulmonary edema, gastrointestinal effects and convulsions (NSC, 1997).

Hydrochloric acid is used in the manufacture of other chemicals including phosphoric acid, chloride chemicals, fertilizers, dyes and pigments. Hydrochloric acid is used in a number of industrial processes including tanning, textiles, brewing, electroplating and metal treating (NSC, 1997).

5. Xylene (mixed isomers)

Xylene (mixed isomers) is a colourless, sweet-smelling liquid. Xylene has three chemical forms: ortho-xylene, meta-xylene and para-xylene. Commercial xylene, generally referred to as xylene (mixed isomers) or technical xylene, is a mixture with differing proportions of these three chemical forms of xylene (CCOHS, 1998).

Following an assessment under the CEPA, it was concluded that xylenes were not present in the Canadian environment in quantities or under conditions that posed a danger to the health of the general Canadian population (HC, 1993). However, occupational studies and clinical trials involving exposure to xylenes have reported various neurological effects, eye, nose, throat and skin irritation, and respiratory and gastrointestinal effects (ATSDR, 1996; CCOHS, 1999).

Xylene occurs naturally in petroleum and coal tar, and is formed in forest fires. Commercial xylene is produced from petroleum and coal tars. Xylene is used as a solvent in paint, printing, rubber and leather industries, as a degreasing and cleaning agent, in paints, inks, dyes, adhesives, cleaning fluids and motor and aviation fuels (CCOHS, 1999).

Xylene evaporates quickly from soil and water into the air. In air, xylene is broken down into other chemicals. It can be broken down by microorganisms in soil and water (ATSDR, 1996).

Five NPRI Pollutants Transferred Off Site in the Largest Quantities - 1998

1. Zinc (and its compounds)

Pure zinc is a bluish-white shiny metal that is insoluble in water. Zinc combines with other chemicals to form zinc compounds such as zinc chloride, zinc sulphate, zinc carbonate, zinc acetate and zinc oxide.

There is little information on environmental exposure of the general Canadian population to zinc. Zinc is an essential element in the diet, although excessive intake has been associated with various metabolic effects (HC, 1987). Occupational exposure involving inhalation of high levels of zinc may cause "metal fume fever", thought to be an immune response affecting the lungs and body temperature (ATSDR, 1995). Exposure to zinc chloride may cause respiratory damage, dermatitis, irritation of the nasal passages and gastrointestinal tract, and pneumonitis (NSC, 1997).

Zinc is one of the most common elements in the earth's crust, and is found in air, soil, water and food. Zinc has a number of uses including coatings to prevent rust, batteries, and is combined with other metals to make alloys such as brass and bronze. Zinc compounds are widely used to make paints, rubber, dye, wood preservatives and ointments (ATSDR, 1995).

Zinc can attach to soil, sediments and small particles in the air. Zinc can move into groundwater and into lakes and streams (ATSDR, 1995).

2. Manganese (and its compounds)

Manganese is a silvery, brittle metal found in many types of rock. Manganese dust or powder is flammable. Manganese combines with other chemicals to form manganese compounds, including manganese acetate, manganese fluoride, manganese chloride, manganese sulphate and manganese dioxide.

Manganese is regarded as an essential element in humans and animals. However, there is little information on the effect of manganese in the environment on the general Canadian population. Acute occupational exposure to manganese dioxide has resulted in "metal fume fever", and chronic exposure to inorganic manganese compounds, pneumonitis, and manganism which involves various neurological symptoms and biochemical alterations. There is also some evidence that occupational exposure to dusts of manganese oxide, sulphate and carbonate may have reproductive effects (HC, 1987). Less severe effects associated with occupational exposure to manganese include irritation of the eyes, nose, throat and respiratory tract (EPA, 1998).

Metallic manganese is used in the steel industry. Manganese compounds can be used in a number of products, including ceramics, matches, glass, metals, inks, paints, rubber, wood preservatives and fungicides.

Manganese and its compounds have moderate acute and chronic toxicity to aquatic life (EPA, 1989). Manganese and its compounds can be highly persistent in water with half-life greater than 200 days. Manganese does not tend to bioaccumulate in fish (EPA, 1989).

3. Sulphuric Acid (see NPRI pollutants released on site)

4. Nitrate ion (in solution at pH equal to or greater than 6.0)

Only the nitrate ion in solution at pH of 6.0 or greater is reportable to the NPRI. Nitric acid (with a pH less than 6.0) is reported separately to NPRI.

Little information is available on the effect of nitrates in the environment on the general Canadian population. However, epidemiological studies involving ingestion of nitrate-contaminated drinking water has been associated with methaemoglobinaemia, a condition whereby the body tissues are deprived of oxygen often leading to death, and to which infants have shown a particular susceptibility. There is also evidence that exposure to nitrates cause damage to the spleen and some suggestion that ingested nitrates increase the risk of cancer in humans (HC, 1987; EPA, 1998).

Nitrates are widely used as fertilizers. Nitrates are also found in sewage and livestock manure.

Nitrates are highly soluble and do not bind to soil, so they tend to enter the ground and surface waters. Nitrates and nitrites do not readily evaporate from water and tend to remain in water until taken up by plants or animals (EPA, 1998).

5. Hydrochloric Acid (see NPRI pollutants released on site)

Five NPRI-listed, CEPA-toxic and Carcinogenic Pollutants Released On Site in the Largest Quantities - 1998

1. Asbestos (friable form)

Asbestos (friable form) is a greyish, non-combustible fibrous material, consisting primarily of magnesium silicate.

Asbestos refers to a group of six different fibrous materials that occur naturally in rocks and soil in certain regions.

Asbestos can enter the air and water from erosion of natural deposits or wearing down of products containing asbestos, such as brake pads. Smaller fibres of asbestos can remain in the air for a long time, while larger particles settle more quickly. Asbestos fibres do not move through the soil and are not easily broken down (ATSDR, 1996).

There has been no assessment of exposure of the general Canadian population to asbestos in the environment. In contrast, occupational and epidemiological studies have documented numerous health effects following exposure to asbestos. These include asbestosis or scarring of the lungs, lung cancer, mesothelioma or cancer of the lining of the chest or abdomen, and possibly gastrointestinal cancers (HC, 1995). In addition, asbestos is on the CEPA List of Toxic Substances and is classified as a Group-I carcinogen by IARC.

Asbestos fibres are resistant to heat and most chemicals. As a result, asbestos is used in a wide range of goods, including roofing shingles, ceiling and floor tiles, cement, automobile products, coatings and paper products (ATSDR, 1996).

2. Arsenic (and its compounds)

Pure arsenic is a grey-coloured metal found in the earth's crust. It is usually combined with one or more other elements such as oxygen, chlorine and sulphur to produce inorganic arsenic and combined with carbon and hydrogen to produce organic arsenic. Inorganic and organic arsenic have different properties and toxicities. Inorganic arsenic is usually more toxic than organic forms (ATSDR, 1993).

Arsenic doesn't evaporate into air. When materials containing arsenic and its compounds are burned or processed, particles of arsenic can become airborne.

Following assessment, it was concluded that inorganic arsenic compounds are carcinogenic to humans and are present in the Canadian environment in quantities or under conditions that pose a danger to the health of the general Canadian population. Inorganic arsenic and its compounds were therefore declared toxic under the CEPA. Numerous occupational studies have consistently demonstrated that exposure by inhalation of inorganic arsenic compounds causes cancer of the respiratory tract. Ingestion of arsenic in drinking water or medicines has also been linked with dermal lesions, peripheral neuropathy, peripheral vascular disease, skin cancer and cancers of various internal organs including the bladder, kidney, lung and liver (HC, 1992; 1993). Acute symptoms of arsenic poisoning reported upon ingestion of drinking water include abdominal pain, vomiting, pain and weakness in the muscles and extremities, and flushing of the skin. Further exposure may be followed by numbness and tingling in the extremities, muscle cramps and skin rash, and after a month, more severe effects on the skin and nails, accompanied by degraded motor and sensory responses. Children are particularly sensitive to the effects of arsenic, developing bronchial, cardiovascular and digestive problems at much lower levels of ingestion of arsenic than adults (HC, 1992).

Arsenic and its salts have low solubility in water, but are highly persistent, with a half-life greater than 200 days. Arsenic can build up in tissues of fish and shellfish. Inorganic arsenic in particle form can stay in the atmosphere for 5 to 15 days (EPA, 1998). Arsenic has high acute toxicity to aquatic life, birds and land animals (EPA, 1986).

Inorganic arsenic is released by industrial and commercial processes, volcanoes and weathering of the earth's crust (EPA, 1998). Inorganic arsenic compounds are used as wood preservatives, insecticides and herbicides (ATSDR, 1993). Some arsenic compounds are used in the microelectronics industry (EPA, 1998).

3. Chromium (and its compounds)

Pure chromium is a grey metal found in rocks, soil, plants and animals as well as in volcanic dust and gases. Chromium has three main forms chromium (0), chromium (III) and chromium (VI). Chromium (III) is stable and occurs naturally in the environment. Chromium (0) does not occur naturally in the environment, and chromium (VI) occurs only rarely. Chromium (III) forms thousands of different compounds with a wide range of chemical properties. Chromium (VI) is often bound with oxygen to form chromates and dichromates (ATSDR, 1993).

Hexavalent chromium was determined to be present in the Canadian environment in quantities or under conditions that posed a danger to the health of the general Canadian population, and was therefore declared toxic under the CEPA. Occupational studies have demonstrated a strong association between exposure to hexavalent chromium and cancers of the nasal passages, lung, kidney, bladder and urinary tract. Other effects reported include nasal ulceration, septum perforation, asthma, bronchitis, skin ulceration and dermatitis (HC, 1994). Hexavalent chromium is also genotoxic in animals. Acute exposures have resulted in liver necrosis, nephritis, gastrointestinal tract irritation, encephalitis and death (HC, 1986).

Chromium is used to make stainless steel and metal alloys, paint pigments, firebrick, tapes, chrome plating, pesticides, leathers and treated wood (ATSDR, 1993).

Larger chromium particles in the air settle in less than 10 days. Chromium can stick to soil and sediments. Chromium is highly persistent in water with a half-life greater than 200 days. Chromium III has moderate acute toxicity and high chronic toxicity to aquatic life and chromium (VI) has high acute and chronic toxicity (EPA, 1986).

4. Lead (and its compounds)

Pure lead is a bluish-grey metal found in the earth's crust. Lead can combine with carbon to form organic lead, or with other compounds to form inorganic lead. Pure lead does not easily break down in the environment, but lead compounds can be changed by sunlight, air and water. When released into the air, lead stays in the air for approximately 10 days. It can then fall out of the air into the soil, where it tends to stick to soil particles (ATSDR, 1993).

Lead has been classified as a toxic substance under the CEPA and studies have indicated that chronic exposure to even small amounts of lead can be harmful, particularly for children. Typical routes of human exposure are inhalation and ingestion, although certain organic species of lead may enter the body through dermal contact. Once absorbed, lead deposits in the soft tissues and the skeleton, the latter where it may remain for several decades. Acute exposure to lead may induce severe gastrointestinal effects, convulsions, coma or death. Chronic exposure to lead is associated with anemia, kidney problems, gastrointestinal effects, and neurological disorders. Hyperactivity, learning disabilities and lower IQ scores are among the various neurological disorders observed in children exposed to lead. Pregnant women with elevated blood lead levels have a higher incidence of miscarriage, stillbirths and premature deliveries (HC, 1996).

Lead is released into the air from industrial process, smelters and refineries (HC 1996). Lead has many different uses, including batteries, metal products, roofing, ceramics, electronics, plastics and ammunition. Many uses of lead in gasoline, paints and solder have been reduced. Concentrations of lead in the air have declined since the introduction of unleaded gasoline in Canada in 1975 (HC, 1996).

5. Benzene

Benzene is a colourless liquid with a sweet odour.

Following assessment, it was concluded that benzene is carcinogenic to humans and is present in the Canadian environment in quantities or under conditions that pose a danger to the health of the general Canadian population. Accordingly, benzene has been classified as a toxic substance under the CEPA. Occupational studies have reported various hematotoxic effects among those exposed to benzene, including depression of bone marrow activity, alterations in white and red blood cell and hemoglobin levels, aplastic anemia, and leukemia. Genotoxic and immune system effects have also been observed. Acute exposure may induce neurotoxic effects, nausea, dermatitis and eye irritation (HC, 1993; CCOHS, 1999).

Benzene is produced from petroleum and coal. Benzene is used to make other chemicals used as solvents and in gasoline (CCOHS, 1999). Benzene is used in the rubber industry, oil refineries, chemical plants and shoe-manufacturing industry (ATSDR, 1989).

Benzene evaporates quickly into air, and can react with other chemicals. In the air, benzene breaks down within a few days (ATSDR, 1997). Benzene is moderately soluble in water, and slightly persistent, with a half-life of 2 to 20 days. Benzene breaks down slowly in soil and can enter groundwater. Benzene has high acute and chronic toxicity to aquatic life (EPA, 1988).

Five NPRI-listed, CEPA-toxic and Carcinogenic Pollutants Transferred Off Site in the Largest Quantities - 1998

1. **Lead (and its compounds)** (see NPRI-listed, CEPA-toxic and carcinogenic pollutants released on site)
2. **Chromium (and its compounds)** (see NPRI-listed, CEPA-toxic and carcinogenic pollutants released on site)
3. **Asbestos (friable form)** (see NPRI-listed, CEPA-toxic and carcinogenic pollutants released on site)

4. Nickel (and its compounds)

Nickel is a silvery metal found in the earth's crust, mainly as a part of silicate, sulphide, oxide and arsenide ores, in volcanoes, forest fires and sea spray. Nickel can combine with other elements to form a wide variety of nickel compounds including nickel carbonyl, nickel sulphate, nickel carbonate, nickel chloride, nickel fluoride and nickel oxide. These nickel compounds have different properties, toxicities and uses.

Following assessment, it was concluded that oxidic, sulphidic and soluble nickel compounds are carcinogenic to humans and are present in the Canadian environment in quantities or under conditions that pose a danger to the health of the general Canadian population. Therefore, these groups of nickel compounds have been classified as toxic under the CEPA. Based on the results of occupational studies, there is a clear association between inhalation of these substances and the development of nasal and lung cancer. Genotoxic effects have also been observed in humans. In addition, exposure to some nickel compounds has been associated with other effects including dermatitis and various nasal disorders (HC, 1994).

Nickel is used for nickel alloys, electroplating, batteries, dyes, coins, machinery parts, stainless steel and catalysts. Nickel carbonyl is used in refining nickel and as a catalyst in petroleum, plastic and rubber industries. Nickel and its compounds are released from a number of sources including the burning of fossil fuels, tobacco smoke, manufacturing processes, refining and smelting processes (ASTDR, 1997).

Nickel and its compounds may remain in the atmosphere for 5-15 days. Nickel attaches to particles in the air and can settle to the ground or be taken out with rain. Nickel attaches to particles that contain iron or manganese, and so is often found in the soil and sediment.

5. Formaldehyde

Formaldehyde is a colourless gas with a strong odour. Formaldehyde is often sold mixed in solution with water or methanol.

The effects of human exposure to formaldehyde in the Canadian environment are currently being assessed under the CEPA. It is known that formaldehyde is associated with nasal, respiratory tract and eye irritation in humans, and is genotoxic and carcinogenic in animals (HC, 1989).

Formaldehyde can be released from industrial processes, electricity generation, transportation and consumer products. Formaldehyde can also be easily formed in the air. Formaldehyde is used in the manufacture of other chemicals, leather tanning, and as a wood preservative. Formaldehyde is often used in products such as detergents, cosmetics and fumigants for its antimicrobial action (EPA, 1998).

Most formaldehyde is released to the air. Formaldehyde is highly soluble in water, with a half-life of between 2 and 20 days. Formaldehyde has high acute and chronic toxicity to aquatic life (EPA, 1989).

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3. Constituents of Tobacco Smoke, 1998. Health Canada.
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Arsenic (and its compounds)

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3. Sulphuric Acid Chemical Backgrounder, 1998. Environment Writer. National Safety Council.

Xylene (mixed isomers)

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Addenda

The 1998 NPRI National Overview is based on information that was received by Environment Canada prior to **March 29, 2000**. Some companies provided new or revised information to Environment Canada after this date. Information received between March 29 and June 14 has been incorporated in an updated version of the 1998 NPRI database, which is available electronically on the NPRI Internet website at <http://www.ec.gc.ca/pdb/npri/>. The following information provides additional context regarding the following sections in the 1998 NPRI National Overview:

1. Appendix 2 - Acetaldehyde

Abitibi-Consolidated Inc., Division Port-Alfred (NPRI # 2636), La Baie, Québec, originally reported on-site releases in air of **10.9 tonnes** of acetaldehyde. This value was reported in error, and has since been revised. The new value is below the reporting criteria. This facility is not required to report for this substance. Total release quantities for acetaldehyde should be reduced accordingly.

2. Appendix 2 - tert-Butyl Alcohol

3M Canada Company (London) (NPRI # 3198), London, Ontario, originally reported on-site releases in air of **12.280 tonnes** of tert-butyl alcohol. This value was reported in error, and has since been revised to **6.728 tonnes**. This revised number does not change the facility's ranking for this substance. Total release quantities for tert-butyl alcohol should be reduced accordingly.

3. Appendix 2 - Chlorine Dioxide

Weyerhaeuser Canada Ltd., Kamloops Pulp Division (NPRI # 2924), Kamloops, British Columbia, originally reported on-site releases in air of **32.000 tonnes** of chlorine dioxide. This value was reported in error, and has since been revised to **25.000 tonnes**. This revised number changes the facility's ranking for this substance. Total release quantities for chlorine dioxide should be reduced accordingly.

4. Appendix 2 - Copper (and its compounds)

Siemens-Westinghouse, Coil Manufacturing Company (NPRI #5759), Mississauga, Ontario, originally reported on-site releases to land of **153.987 tonnes** of copper (and its compounds). This value was reported in error, and has since been revised to **0 tonnes**. This facility should not be mentioned in the listing for this substance in Appendix 2 of the report. Total release quantities for copper (and its compounds) should be reduced accordingly.

5. Appendix 2 - Cyanides (ionic)

Placer Dome North America, Musselwhite Mine (NPRI # 5656), Thunder Bay, Ontario, originally reported on-site releases to water of **0.032 tonnes** and on-site releases to air of **0.834 tonnes** of cyanides (ionic). These values were reported in error, and have since been revised. The revised on-site releases to water is **0.015 tonnes** and to air is **0 tonnes**. This facility should not be mentioned in the listing for this substance in Appendix 2 of the report. The release quantities for cyanides (ionic) should be reduced accordingly.

6. Appendix 2 - Formaldehyde

Abitibi-Consolidated Inc., Division Port-Alfred (NPRI # 2636), La Baie, Québec, originally reported on-site releases to water of **157.700 tonnes** and on-site releases in air of **0.700 tonnes** of formaldehyde. These values were reported in error, and have since been revised. The revised on-site releases to water is **10.800 tonnes** and to air is **3.800 tonnes**. These revised numbers change the facility's ranking for this substance. Total release quantities for formaldehyde should be adjusted accordingly.

7. Appendix 2 - Molybdenum Trioxide

Atlas Steels Inc., Atlas Specialty Steels (NPRI # 3158), Welland, Ontario, originally reported on-site releases in air of **0.479 tonnes** of molybdenum trioxide. This value was reported in error, and has since been revised to **0.005 tonnes**. This facility should not be mentioned in the listing for this substance in Appendix 2 of the report. Total release quantities for molybdenum trioxide should be reduced accordingly.

8. Appendix 2 - Naphthalene

Trentonworks Ltd. (NPRI # 4993), Trenton, NS, originally reported on-site releases in air of **28.990 tonnes** of naphthalene. This value was reported in error, as the facility does not release this substance. This facility should not be mentioned in the listing for this substance in Appendix 2 of the report. Total release quantities for naphthalene should be reduced accordingly.

9. Appendix 2 - Nitric Acid

Decor Products International (NPRI # 3850), Midland, Ontario, originally reported on-site releases in air of **2.800 tonnes** of nitric acid. This value was reported in error, as the facility does not release nitric acid. This facility should not be mentioned in the listing for this substance in Appendix 2 of the report. Total release quantities for nitric acid should be reduced accordingly.

10. Appendix 2 - Phosphoric Acid

Abitibi-Consolidated Inc., Division Kenogami (NPRI # 0979), Jonquière, Québec, originally reported an on-site release to water of **3.200 tonnes** of phosphoric acid. This value was reported in error, as the facility does not release phosphoric acid. This facility should not be mentioned in the listing for this substance in Appendix 2 of the report. Total release quantities for phosphoric acid should be reduced accordingly.

11. Appendix 2 - Phosphoric Acid

Decor Products International (NPRI # 3850), Midland, Ontario, originally reported on-site releases to air of **1.000 tonnes** of phosphoric acid. This value was reported in error, as the facility does not release phosphoric acid. This facility should not be mentioned in the listing for this substance in Appendix 2 of the report. Total release quantities for phosphoric acid should be reduced accordingly.

12. Appendix 2 - Phosphorus (yellow or white)

F.F. Soucy Inc. (NPRI # 4790), Rivière-du-Loup, Québec, originally reported on-site release to water of **4.700 tonnes** of phosphorus (yellow or white). This substance was reported in error, as the facility does not release phosphorus (yellow or white). This facility should not be mentioned in the listing for this substance in Appendix 2 of the report. Total release quantities for phosphorus (yellow or white) should be reduced accordingly.

13. Appendix 2 - Phosphorus (yellow or white)

Les Services Safety Klean (Mercier) Ltée. (NPRI # 5449), Mercier, Québec, originally reported on-site releases in air of **11.327 tonnes** of phosphorus (yellow or white). This substance was reported in error, as the facility does not release phosphorus (yellow or white). This facility should not be mentioned in the listing for this substance in Appendix 2 of this report. Total release quantities for phosphorus (yellow or white) should be reduced accordingly.

14. Appendix 2 - Phosphorous (yellow or white)

Irving Paper (NPRI # 3394), Saint John, New Brunswick, originally reported on-site releases to water of **10.972 tonnes** of phosphorous (yellow or white). This value was reported in error, as the facility does not release this form of phosphorous. This facility should not be mentioned in the listing for this substance in Appendix 2 of the report. Total release quantities for phosphorous (yellow or white) should be reduced accordingly.

15. Appendix 2 - Phthalic Anhydride

Ashland Canada Inc., Resin & Chemical Division (NPRI # 0120), Mississauga, Ontario, originally reported total releases of **0.555 tonnes** of phthalic anhydride. This value was reported in error, and has since been revised to **0.489 tonnes**. This facility should not be mentioned in the listing for this substance in Appendix 2 of the report. Total release quantities for phthalic anhydride should be reduced accordingly.

16. Appendix 2 - Sulphuric Acid

Alberta Power Limited, Battle River Generating Station (operated by ATCO Electric) (NPRI # 1033), Forestburg, Alberta, originally reported on-site releases in air of **841.417 tonnes** of sulphuric acid. This value was based on a stack survey. A revised number of **27.080 tonnes** was obtained using emission factors. This revised number changes the facility's ranking for this substance. Total release quantities for sulphuric acid should be reduced accordingly.

17. Appendix 2 - Sulphuric Acid

Avenor Maritimes Inc., Dalhousie Mill (NPRI # 4876), Dalhousie, New Brunswick, originally reported on-site releases in air of **1 642.000 tonnes** of sulphuric acid. This value was reported in error, and has since been revised to **1.642 tonnes**. This revised number changes the facility's ranking for this substance. Total release quantities for sulphuric acid should be reduced accordingly.

18. Appendix 2 - Sulphuric Acid

Sheerness Generating Station (operated by ATCO Electric) (NPRI # 1036), Hanna, Alberta, originally reported on-site releases in air of **1 743.655 tonnes** of sulphuric acid. This value was originally based on a stack survey. A revised number of **32.500 tonnes** was obtained using emission factors. This revised number changes the facility's ranking for this substance. Total release quantities for sulphuric acid should be reduced accordingly.

19. Appendix 2 - Vanadium (fume or dust)

North Atlantic Refining Ltd. (NPRI # 4316), Come by Chance, Newfoundland, originally reported on-site releases in air of **61.917 tonnes** of vanadium (fume or dust). This value was reported in error, as the facility does not produce this form of vanadium. Due to a data processing error, this facility should not be mentioned in the listing for this substance in Appendix 2 of the report. Total release quantities for vanadium (fume or dust) should be reduced accordingly.

20. Table 4 and Appendix 2 - Zinc (and its compounds)

Ispat Sidbec Inc., Acierie (NPRI # 3649), Contrecoeur, Québec, originally reported on-site releases to land of **2 898.160 tonnes** of zinc (and its compounds). This value was reported in error, and has since been revised. The revised number for releases to land is **1 965.330 tonnes**. This facility should not be mentioned in Table 4 of the report. This revised number does not change the facility's ranking for this substance. Total release quantities for zinc (and its compounds) should be reduced accordingly.